

Federal Energy Regulatory Commission

Date: March 30, 2017

Volume:

Case: Hydropower Regulatory Efficiency Act of 2013



Ace-Federal Reporters, Inc.
Phone: 202-347-3700
Fax: 202-737-3638
Email: info@acefederal.com
Internet: www.acefederal.com

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

FEDERAL ENERGY REGULATORY COMMISSION
HYDROPOWER REGULATORY EFFICIENCY ACT OF 2013

DOCKET NO. AD13-9-000

FEDERAL ENERGY REGULATORY COMMISSION
888 FIRST STREET NE
WASHINGTON, D.C. 20426

THURSDAY, MARCH 30, 2017
12:00 P.M.

Page 2

1 APPEARANCES:

2 First Panel

3 Rachel McNamara -- Chair

4 Timothy Furdyna

5 Commissioner Colette Honorable

6 Ramya Swaminathan

7 David Hamilton

8 Stephanie Hayes

9 Carrie Allison

10 Jennifer Ryall

11 Carol Wasserman

12 Dustin Hahn (by phone)

13 Vince Yearick

14 Chairman Cheryl LaFleur

15 William Little

16 David Brown Kinloch

17 Paul Jankel

18 Second Panel

19 Ryan Hansen -- Chair

20 Carl Borgquist

21 Mona Koerner

22 Amy Klein

23 William Little

24 Thomas O'Keefe

25 Carol Wasserman

1 Kyle Jones

2 Paul Jankel

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

Page 4

1 P R O C E E D I N G S

2 MR. FURDYNA: All right, is everybody ready?

3 Good afternoon and welcome to the Commission's workshop to
4 solicit public comment on the effectiveness of the tested
5 two year pilot licensing process for hydropower projects and
6 nonpower dams and closed loop pump stored projects under
7 docket number AD-13-9-000 as required by Section 6 of the
8 Hydropower Regulatory Efficiency Act of 2003.

9 My name is Timothy Furdyna. I'm an attorney with
10 FERC's Office of the General Counsel, Energy Projects
11 Division. I'd like to note that although the Act affects --
12 other aspects of hydropower authorization, today we will
13 just be discussing what is required under Section 6.

14 In addition, I'd first like to thank all the
15 participants for being here and on the phone today for what
16 I'm sure will be an informative discussion.

17 We're going to begin the workshop with some
18 opening remarks from Commissioner Honorable, after which we
19 will introduce the FERC staff that are with us. And then
20 we'll go up with the ground rules for the workshop and
21 provide a brief summary of legislation and subsequent
22 licensing process that brought us here today.

23 Our panelists will introduce themselves at the
24 beginning of each panel session. During our first panel,
25 we'll be gathering your comments regarding the effectiveness

1 of the tested two year pilot process, which was the Kentucky
2 River lock and dam number 11 hydroelectric project, project
3 number 14276, located on the Kentucky River in Estill and
4 Madison Counties, Kentucky.

5 During our second panel, we'll be discussing the
6 practicability of implementing a two year process on a
7 national programmatic scale. Sometime a little later this
8 afternoon, we also hope to hear from Chairman LaFleur.

9 A couple of quick reminders before hearing from
10 Commissioner Honorable. Please turn off all cell phones as
11 they cause interference with our audio-visual equipment. No
12 food or drinks other than bottled water are allowed in the
13 Commission meeting room. And while it was not included in
14 the agenda, we do plan to take a brief 15 minute break
15 following the first panel.

16 Bathrooms and water fountains are available outside of the
17 room at the back of each of the elevator bays. Let me now
18 turn it over to Commissioner Honorable for her opening
19 remarks.

20 COMMISSIONER HONORABLE: Thank you and good
21 afternoon, everyone. And again, we're recording good
22 afternoon and thank you, Tim. It's an honor to be here with
23 you for this important topic. I want to thank those of you
24 who came from near and far. Hence our noon start time to be
25 friendly to those travelling from the West Coast.

Page 6

1 As you are aware as part of the Hydropower
2 Regulatory Efficiency Act of 2013, Congress directed us to
3 determine whether we could develop a more efficient
4 licensing process for certain projects at existing
5 nonpowered dams and closed loop storage facilities. And in
6 my opinion, this should be low hanging fruit for the
7 hydropower development sector. We've gone through the
8 pilot stage now as mandated by Congress. And we're here
9 today to ascertain really and learn what went well, what
10 didn't, and what we can do to improve the process going
11 forward.

12 We at FERC certainly recognize that we have many
13 interests to balance in the licensing process. And this is
14 because hydropower projects have considerable effects of the
15 environment, both -- for some to be perceived positively and
16 negatively. Balancing all of these interests and the
17 stakeholders involved is not a quick or expedient process,
18 but we're aware that the process can be costly and that
19 those costs can have the effect of reducing hydropower
20 availability.

21 Although we can't compromise the quality of our
22 work, we are always looking for ways that the Commission can
23 do its work more efficiently and more effectively. And on
24 that point, I'd like to acknowledge and thank our very hard
25 working team Terry Turpin and others who are here, who are

1 leading the way. And I especially want to thank Tim and his
2 colleagues around the table for their work in preparing for
3 this workshop. And I'm looking forward to hearing from the
4 experts who will appear here today as long as I am able.

5 I look forward to hearing about the lessons
6 learned from your experiences and our collective experiences
7 thus far and what we can do to make this a smooth process
8 going forward. Thank you for your time.

9 MR. FURDYNA: Thank you, Commissioner. We're
10 fortunate to have a number of representatives from a
11 cross-section of stakeholder groups here today that have
12 agreed to sit on our panel and help stimulate discussion.
13 I'd like to start off by introducing several members of
14 FERC's senior staff, Vince Yearick, director of the Office
15 of Energy Projects, Division of Hydropower Licensing; John
16 Katz, associate general counsel, Office of the General
17 Counsel, Energy Projects Division; Terry Turpin, director
18 of the Office of Energy Projects, and is Sarah Salazar,
19 environmental biologist in Office of the Energy Projects,
20 Division of Hydropower Licensing and project coordinator for
21 the pilot two year licensing process workshop and
22 Congressional report.

23 Next, we'll have the FERC staff here at the table
24 introduce themselves. We can begin again with me. We've
25 already met. My name is Tim Furdyna.

Page 8

1 MR. HANSEN: Hi, I'm Ryan Hansen. I'm with the
2 Division of Hydropower Licensing.

3 MS. MCNAMARA: And I'm Rachel McNamara, also with
4 the Division of Hydropower Licensing.

5 MR. FURDYNA: Thank you for being here today.
6 Again, we'll have the panelists introduce themselves
7 shortly. Before we begin the panel sessions first, I'd like
8 to do a quick phone check. Operator Dustin, can the callers
9 hear us?

10 MR. HAHN: Yes, they can.

11 MR. FURDYNA: All right, great. Next, I'd like
12 to go over some of the ground rules for our workshop today.
13 Again, please make sure to turn off all of your cell phones.
14 For the benefit of our court reporter that is recording
15 today's proceeding, as well as those listening on the phone
16 and the webcast, please make sure to use a microphone when
17 speaking. For those of you in the audience, please use the
18 microphone located at the front of the room when speaking
19 and state your name and affiliation when doing so.

20 For those of us at the table, please make sure to
21 turn your microphone on when speaking and off when you're
22 not, to reduce any background noise. Since those of us at
23 the table have name tags, there's no need to state your name
24 and affiliation prior to speaking.

25 On that point, if you hear a knock on the glass

1 in the back of a room, that means our audio-visual personnel
2 can't hear you. So again, please make sure your microphone
3 is on before speaking.

4 For those of you on the phone, we will solicit
5 comments from you at specific periods within the discussion.
6 If you have a question or comment, please let the operator
7 know so that they can cue you up when the appropriate time
8 comes.

9 Finally, I'd like to remind everyone that we are
10 here today to have discussions on the effectiveness of a
11 tested two year pilot licensing process and programmatic
12 level discussions on the feasibility of a two year licensing
13 process. So while we can discuss the effectiveness of
14 licensing processes for completed projects, please avoid
15 discussing the merits of pending cases.

16 As a primer for our discussion, here's a brief
17 overview of the Hydropower Regulatory Efficiency Act of 2013
18 and more specifically what Section 6 of the Act requires.
19 Congress enacted the Act on August 9th, 2013. Among other
20 sections of the Act, Section 6 requires the Commission to
21 investigate the feasibility of a two year licensing process
22 for hydropower development and nonpower dams and closed loop
23 pump storage projects.

24 As specified by the Act, this two year period
25 would include the time to complete any pre-filing and post

Page 10

1 filing requirements. The Act specifically required
2 Commission staff to conduct an initial workshop to solicit
3 input on how best to implement a two year process, which was
4 held on October 22nd, 2013. We were to develop and
5 implement pilot projects to test the two year process.

6 A pilot two year licensing process was tested for
7 the Kentucky River lock and dam number 11 project between
8 May 5th, 2014 and May 5th, 2016.

9 Further, we are to conduct today's final workshop
10 to solicit input on the effectiveness of each tested two
11 year process and finally, submit a report to Congress that
12 describes the outcomes of the pilot project, comments
13 received from the public, new policies and regulations
14 necessary for a two year process, or if a two year process
15 is found not to be practicable, the process, legal,
16 environmental, economic, and other issues that justify such
17 a determination. This report is due to Congress by May
18 29th, 2017.

19 MS. MCNAMARA: Good afternoon. I am Rachel
20 McNamara and I'm an outdoor recreation planner in the
21 Division of Hydropower Licensing, South Branch.

22 I worked as a specialist for recreation and
23 cultural resources on the Kentucky River lock and dam 11
24 project. And this afternoon, I'll be moderating our first
25 panel. With this panel, we hope to set the stage for

1 discussions that will occur throughout the rest of the
2 afternoon about the outcomes of the pilot two year process
3 and recommendations for the future of expedited license
4 processing for original projects.

5 As you may know, in response to our request for
6 projects to test the two year pilot, we received a proposal
7 from Free Flow Power, now Rye Development to license an
8 original project at the existing Kentucky River lock and dam
9 number 11 in Estill and Madison Counties, Kentucky.

10 The project proposal was for a run of river
11 facility using the existing dam and reservoir with a new
12 power house constructed in the existing lock structure. The
13 two generating units were proposed to have a total installed
14 capacity of 5 megawatts. The project was licensed May 5th,
15 2016. We have with us several participants in the Kentucky
16 lock and dam 11 project licensing process, who will be able
17 to share with you some of their first hand experiences with
18 the project. I'll give each of our panelists a chance to
19 introduce themselves, beginning with Ramya Swaminathan.

20 MS. SWAMINATHAN: Thank you. I'm Ramya
21 Swaminathan. I'm the CEO of Rye Development. As Rachel
22 mentioned, we were the applicant for the project proposed to
23 be located on Kentucky lock and dam 11. We're also a
24 developer of other projects and have a number of other
25 proposed projects in our portfolio. Thank you.

Page 12

1 MR. HAMILTON: I'm David Hamilton. I'm a civil
2 engineer with the Kentucky River Authority. And our agency
3 is the owner in this case of the structure on behalf of the
4 Commonwealth of Kentucky. We're a fairly small agency.
5 We're operated by a 12 member board, the agency itself owns
6 and operates 14 locks and dams on the Kentucky River and one
7 of them happened to be lock and dam number 11.

8 MS. HAYES: Hello, I'm Stephanie Hayes. I'm the
9 supervisor for the 401 water quality certification section
10 out of the Kentucky Division of Water for the Department of
11 Environmental Protection. My group is part of the
12 permitting process for these Federal Energy Regulatory
13 Commission projects. And basically, we kind of are part of
14 the environmental oversight for that within the state of
15 Kentucky. Any project within the waters of the
16 Commonwealth has to get a 401 certification. So we have the
17 oversight for that particular part.

18 MS. ALLISON: Hi, I'm Carrie Allison with the
19 Fish and Wildlife Service in the Kentucky Field Office.
20 I've been with Service about 10 years. I am primarily a
21 consultation biologist. Had worked on hydropower off and on
22 for about five years and came onto this project. It was
23 probably about six to seven months in the process when it
24 got handed over to me, so.

25 MS. RYALL: I'm Jennifer Ryall. I'm the

1 environmental review coordinator at the Kentucky Heritage
2 Counsel, which is the state's historic preservation office.
3 And my job there is reviewing projects, undertakings,
4 effects on eligible or listed historic resources under
5 Section 106 of the National Historic Preservation Act.

6 MS. MCNAMARA: Thank you, panelists. The first
7 question I'd like to direct to Ramya, since it involves Rye's
8 decisions in selecting a project to use the two year pilot
9 process. Ramya, we know that at the time Free Flow and now
10 Rye had a number of preliminary permits or projects on the
11 Kentucky River and in other locations. What made lock and
12 dam 11 a good candidate for the two year process?

13 MS. SWAMINATHAN: So as you mentioned, we had a
14 number of other permits that we were evaluating at the time
15 on the Kentucky River. And we had a number of permits and
16 other projects in various stages of development in other
17 parts of the country as well.

18 There were a number of criteria that were listed
19 in the original pilot process solicitation. So the process
20 that we undertook to select a project for the two year
21 process really was answerable to two different sets of
22 criteria. One, our internal feasibility criteria. We look
23 at projects, a variety of technical factors that assess the
24 project's economic feasibility as we are responsible to our
25 investors ultimately to make sure that the projects that we

Page 14

1 select and proceed on make a return for them. There are
2 environmental factors to consider, as well as general
3 market factors, which feeds into the economic feasibility
4 criteria.

5 Separately, there were also the criteria that
6 were contained in the original pilot solicitation. And many
7 of our projects actually fit a number of those criteria.
8 The one that stood out to us as a potentially difficult one
9 to satisfy was the requirement for a feasibility
10 determination from the dam owner.

11 And so when you put these variety of criteria
12 together in the projects that we were looking at in our
13 portfolio, Kentucky 11, lock and dam 11 really stood out as
14 the proposed candidate for this process.

15 MS. MCNAMARA: Thank you. For David, since your
16 agency is the dam owner or the state of Kentucky with your
17 agency overseeing the lock and dam, do you have anything
18 that you'd like to add regarding your interactions with Rye
19 or the factors that contributed to or may have hindered the
20 successful licensing of the project within a two year time
21 frame?

22 MR. HAMILTON: I would say the two years was
23 definitely I felt doable on our behalf as far as what we had
24 to do. We had some discussions with Rye prior to them, I
25 think, submitting it for a two year project. So there was

1 some early on conversations with us, because I think they
2 were making sure they could clear that hurdle. That's kind
3 of a big thing. So having a willing owner, I think, is a
4 big part of it as far as being able to get through the two
5 year process.

6 MS. MCNAMARA: Thank you. For the other
7 panelists, do you have additional thoughts on whether there
8 were project designs, site selection, environmental,
9 regulatory, or economic factors that facilitated or hindered
10 the pilot process, Stephanie?

11 MS. HAYES: Yeah, I think the biggest one for the
12 state of Kentucky with a 401 process within our regulations,
13 it states that for an individual certification, which is
14 what all of our FERC projects become, we have to give public
15 notice for 30 days what we call a complete application.

16 In this case, we could not have a complete
17 application. This was very much in the essentially concept
18 phase. So we couldn't do what was our normal 401 process
19 and our normal certification. So we ended up kind of having
20 to think very much outside of the box to still stay true to
21 our regulations within the state, but get FERC and Rye the
22 materials and the certification that we're calling the
23 interim, which I'll talk more about later, that could
24 satisfy those requirements, but stay true to our legal
25 authorities.

Page 16

1 MS. MCNAMARA: Thank you. Carrie?

2 MS. ALLISON: So yeah, site selection on this
3 project was a big one for us. You know, we kind of look at
4 the overall environmental impact of a project, but we also
5 look at and actually my job as consultation biologist is
6 whether there are federal listed species within the
7 project's footprint.

8 For a hydropower project, typically, if you've
9 got federally listed aquatic species, those impacts are
10 really hard to avoid and it takes some time to work through
11 that process. This project did not have any federally
12 listed aquatics species within the footprint. It had the
13 potential for some plants and potential for bats, but land
14 impacts are a lot easier for us to address for this type of
15 project than aquatics. Their not having the aquatic impacts
16 on species was a lot easier for us to work through. So it
17 facilitated a lot quicker.

18 MS. MCNAMARA: Thank you. And Jennifer?

19 MS. RYALL: I would echo some of the concerns
20 from a second ago as far as reviewing under Section 106.
21 Since there's portions of the project's design that won't be
22 known for a while under I guess the HPMP, that's sort of
23 what resolves that for right now, but it does push some
24 aspects of the project review kind of down the road a little
25 bit, so some of, I guess, the discussion was talking about

1 design that might not happen for like five years down the
2 road or something like that.

3 So our concern, I guess, just kind of red flag
4 would be that that might push also down the road need for
5 additional cultural, historic, or archeological survey if
6 there might be elements that we don't know about right now
7 that could have an adverse effect on eligible or listed
8 resources.

9 MS. MCNAMARA: Great, thank you. We will open
10 the -- this question up to the audience. If you have any
11 related comments or questions, if they're not specific to
12 the question that you see appearing on the Powerpoint right
13 now, we will have a time for more general questions later.
14 So are there any comments from the audience or questions
15 from the audience about this topic? Okay. Please remember
16 just to turn the microphone on over there. State your name
17 and then the court reporter would also appreciate the
18 spelling of your name.

19 MS. WASSERMAN: My name is Carol Wasserman,
20 W-a-s-s-e-r-m-a-n. I'm the policy director for New England
21 Hydropower. My question is either to Rye development or to
22 the State of Kentucky. Who owns and holds the act of the
23 property rights to the project and how were those acquired?

24 MS. MCNAMARA: Turn on your microphone, ma'am.

25 UNIDENTIFIED SPEAKER: Yeah.

Page 18

1 MS. WASSERMAN: Are you telling me you didn't
2 hear me?

3 MS. MCNAMARA: I will restate the question. So
4 the question was to Rye and to the Kentucky River Authority.

5 MS. WASSERMAN: And how were the property rights
6 necessary to secure the license acquired? Who is the holder
7 and how did those property rights transfer to satisfy the
8 Commission's requirements?

9 MS. MCNAMARA: Thank you. Ramya, do you want to
10 start with that question?

11 MS. SWAMINATHAN: Yes. So the Kentucky River
12 Authority is the owner of the dam. And as David mentioned,
13 we approached them early on before applying for the pilot
14 process to make sure, as he mentioned during his earlier
15 comments, that there was a willingness on their part to work
16 with us as we went through the process and there certainly
17 was. So we're very appreciative of that flexibility on
18 their part. But in terms of property rights, we expect to
19 work out a lease with them.

20 MS. MCNAMARA: David, did you have anything to
21 add?

22 MS. HAMILTON: Yeah. So we've got -- this is
23 kind of a new territory for us. It's not something that
24 we've done a whole lot of. Of the 14 structures, there was
25 -- there's one existing hydro that was built in the late

1 1920s. We did go through a change of ownership at that
2 plant. That's at lock and dam number 7. So at that point,
3 that was back in early 2000s, 2004 or '05, '06 range. So at
4 that time, we did develop some standard lease agreement
5 language.

6 And currently, we're dealing with two other
7 locations. They're not in the two year pilot program at
8 locks 12 and 14, where we'll be treating them the same way.
9 So it'll be handled through a lease agreement. There won't
10 be the actual property will stay the property of the
11 Commonwealth as far as lock and dam goes.

12 The power plant will be the -- will be owned by
13 the -- be owned by Rye in this case. And it'll be operated
14 on our facility through a lease agreement.

15 MS. MCNAMARA: Thank you. Now any other
16 questions from the audience? I see none. Dustin, are there
17 any questions from the phone?

18 MR. HAHN: No questions at this time.

19 MS. MCNAMARA: Okay, thank you. So our next
20 question I'm going to direct to you our agency
21 representatives. So Carrie, Stephanie, and Jennifer.
22 Thinking about the requirements for consulting under the
23 Endangered Species Act, under Section 401 of the Clean Water
24 Act, or under Section 106 of the National Historic
25 Preservation Act, were there any modifications made to

Page 20

1 your agency's standard practices to accommodate the pilot
2 process schedule? Carrie, I'd like to start with you.

3 MS. ALLISON: Sure, okay, so not really. We did
4 have one very small issue, but I don't think it was unique
5 to the pilot process. I think it's actually -- it was an
6 access issue. So one of the easiest ways to determine
7 whether or not a project is going to impact a listed species
8 is to do a presence absence survey. We had the potential
9 not known habitat, but the potential for key plant
10 species to be within the land footprint of this project.

11 And so, you know, like I said, one of our first
12 recommendations was to go out and just survey the site to
13 see if the plant is present. And then if it's not, then we
14 get to move forward.

15 And what we found is that Rye only had access to
16 portions of the project. And they couldn't get access to
17 the full area until they had their license, but they
18 couldn't get their license until all of their endangered
19 species stuff had been taken care of. So we ended up, they
20 did a great job. They surveyed the areas that they could.
21 And based on that best available information, it really
22 didn't seem like it was probable that the species, the two
23 plant species would be there.

24 But we also kind of did a conditional
25 concurrence, which is something we don't do very often in

1 that we made it not likely to adversely affect
2 determination, based on the habitat information we had, but
3 also in Rye agreeing to go back to the places that they
4 couldn't access before. Survey the site for plants before
5 construction started. And then if they came across any of
6 those plants, then they would coordinate with us
7 additionally.

8 You know, with plants, you can do that. You
9 know, Rye had some comfort level. And we can move. We can,
10 you know, there were some things that they could do. So
11 typically, we like to see the entire site surveyed before we
12 do that concurrence, but in this case, because we had
13 preliminary habitat information, and we had the agreement to
14 go in before construction started, we were comfortable with
15 making that determination.

16 MS. MCNAMARA: Thank you. Stephanie, why don't
17 you talk about your agency's Section 401 process?

18 MS. HAYES: Sure. So normally, the FERC projects
19 are some of our largest and longest running projects to get
20 a certification. Typically, what we do, we have quite a few
21 preapplication meetings, which we also did with Rye as well.
22 There's significant environmental data that is normally
23 collected as far as endangered species, mussel surveys being
24 a large one in our area, DO levels for typically a quite
25 substantial amount of time before any application is

Page 22

1 submitted.

2 We also typically have a full application
3 package, like I said before, with all the engineering
4 components of final plans, final timelines, and schedules.

5 In this particular case, like I said before, that
6 was not feasible. So we did in this case, unlike Carrie, we
7 actually changed ours significantly. And what we ended up
8 having to do is what I had called an interim certification,
9 which essentially what we did was we met with Rye quite a
10 few times and outlined with them essentially every possible
11 condition that they could end up with, with different
12 scenarios depending on -- we had the general idea of what
13 they wanted to do, but depending on variations of what could
14 happen on schedules, things of that sort, we basically
15 conditioned -- it's probably one of our longest
16 certifications because we threw in every condition we could
17 think of to make sure we were covering our bases.

18 But essentially, what it comes down to is there
19 is a clarification in there saying that it is not a final
20 water quality certification. If any of those conditions are
21 not met or not agreed upon, that we can revoke that at that
22 time and that no construction can commence until that final
23 certification is in hand with Rye Development.

24 So with that broken down, it is the first of its
25 kind. We've never done anything like that. And like I had

1 said, we had to figure out a way to get Rye and FERC what
2 they needed without compromising or regulations. And so,
3 doing this, where it's not a true certification, but it
4 outlines exactly what is expected of Rye was able -- allowed
5 us to be able to get that process moving without any
6 complications. Now we still haven't seen that to fruition,
7 because obviously they'll have to -- we have to see how
8 this will work when we do change that from interim to a
9 final.

10 But I think the way that we did it, we really
11 covered our bases. So it's probably just going to be
12 modifications to that to the final actual certification.
13 But in that case, we will public notice it for the normal 30
14 days and then issue Rye at that time their final
15 certification for that project.

16 MS. MCNAMARA: Okay, thank you. And last,
17 Jennifer did you have any additional thoughts about Section
18 106?

19 MS. RYALL: I would say just the main change for
20 us was in quicker turnaround times on our responses than a
21 lot of times we're able to get back to people. We have a
22 very small agency that's stretched very thin right now. So
23 I just made sure Rachel reached out very, very early before
24 I ever actually saw a Section 106 submission come in to
25 explain the two year process to me so I understood it. I

Page 24

1 knew what to look for. If I saw emails coming in or calls
2 or submissions coming in, I went ahead and pulled those to
3 help meet the two year deadline.

4 And as far as our response, we went much like
5 Fish and Wildlife on the conditional response, which is very
6 typical for us, actually. We do a lot of conditional
7 responses.

8 In this case, it was conditional on various
9 things. So if there are any changes to the area of
10 potential effect, we didn't know certain design elements
11 about the lock and dam, about the transmission lines and
12 other things. So our response was conditional in that
13 sense. We did concur with an adverse effect based on what
14 we knew about what was happening to lock and dam 11, but
15 there's a lot of things kind of still left out there that
16 will need review.

17 MS. MCNAMARA: Thank you. David, I wanted to
18 give you a chance, if you had any additional thoughts?

19 MR. HAMILTON: To be honest, we don't have really
20 have a whole lot of standing processes, because it's so --
21 such a new thing to us. So I can't really say as to how
22 much we change just because it's something new.

23 But I would mention, too, that you -- there are
24 -- this -- there is some upside to a shorter process. Like
25 I said before, we're governed by a 12 member board. And

1 when you start getting into stuff that's stretching out six,
2 seven years, half to three^quarters of our board has
3 changed at that point, so we have to go back to a whole new
4 board and explain where we are in the process. So having a
5 shorter time window kind of helps us in that regard.

6 MS. MCNAMARA: Thank you. And Ramya, did you
7 have any responses that you wanted to add?

8 MS. SWAMINATHAN: Yeah, I wanted to add two
9 things. One is, you know, we were very appreciative of all
10 the resource agencies up here and other stakeholders who,
11 you know, communicated with us frequently. And in cases
12 where it was, you know, kind of standard business for them
13 certainly, we all work together. But in cases where it
14 wasn't, we were able to come to the table and, you know,
15 figure out a solution that worked for the process.

16 The one thing I will say is that it's not unusual
17 for us to run into states that are used to seeing with a 401
18 application final design, which in the context of the
19 typical FERC licensing process really doesn't -- it hasn't
20 been something that we've been able to provide this early in
21 the process. And so, we appreciate the state of Kentucky
22 working with us on this. And we've had to do the same kind
23 of creative solution in other states as well to satisfy the
24 requirements of the FERC licensing.

25 The thing I'll say about process from our

Page 26

1 standpoint, having been through a number of other licensing
2 processes as well on other projects unrelated to the
3 Kentucky lock and dam licensing process is we tend to think
4 about processes, regulatory processes as what is something
5 we can state as being attractive to private capital because
6 ultimately, we're attracting private capital to invest in
7 hydropower development.

8 And some of the processes around the pilot
9 process that were absolutely terrific were sort of a clearer
10 schedule for interim steps along the way, certainty and
11 clarity on the number and the scope of studies, which were
12 provided upfront in the process letter, and a target
13 licensing date, even if it was not a commitment and
14 contingent on a whole lot of other things. Those were
15 really terrific for us.

16 MS. MCNAMARA: Thank you. I'd now like to open
17 it the audience for any questions or comments regarding
18 standard practices or processes. I see none. Dustin, are
19 there any questions or comments from the phone?

20 MR. HAHN: There's no questions at this time.

21 MS. MCNAMARA: Okay, thank you. So for our
22 panelists, and I think this is one that I will have everyone
23 speak to, was sufficient information provided or developed
24 during pre-filing? And I think some of you have already
25 touched on this. So we're talking about information that

1 was provided in the preapplication document, supplemented by
2 study reports, or included in the draft license application
3 that allowed you to efficiently and timely fulfill your
4 responsibilities. I can start with Jennifer.

5 MS. RYALL: I would say that information was
6 incredibly helpful to have as far as the timelines. And I
7 think it just kept everybody on the same page as far as
8 working together to meet the two year time frame.

9 MS. MCNAMARA: Carrie?

10 MS. ALLISON: Yeah, this is probably the one
11 thing that I would want to touch on the most, because you
12 know, a lot of times when we're doing a hydro project, the
13 applicant isn't in the state and then we're used to working
14 with a federal agency that's also in the state. And you
15 guys are in D.C. So this project, the amount of
16 communication we have both from Sarah and from Rye was just
17 unbelievably helpful.

18 So we would get information submitted to us on
19 habitat assessments in like a, you know, an email or a phone
20 call from Sarah letting me know this is where we are in the
21 process. This is what this is and then a follow up from
22 Rye. Did you get this. Is there, you know, and do you have
23 any questions.

24 And so, to have that level of responsiveness,
25 both from the action agency and from the applicant was huge

Page 28

1 for us in being able to meet our timelines and making sure
2 that, you know, we weren't letting anything slip through the
3 cracks and being able -- because when we're brought in
4 upfront, and we're brought in early, then there's a lot more
5 options. There's a lot more flexibility, you know, with the
6 amount of time that they're given. So I think having all of
7 that information upfront was huge for us in getting this
8 done in time.

9 MS. MCNAMARA: Stephanie?

10 MS. HAYES: Yeah, so I would say with our agency,
11 we actually had significant turnover during this process.
12 We've had three people on the project since it started.
13 There was some confusion in the beginning, I think, because
14 my staff had never seen anything like this. I don't think
15 they were fully aware of the time constraints. And so, we
16 did have some confusion for the first little bit.

17 However, once that was cleared up and clarified,
18 I think I was on the phone with Dawn Leoson from Rye almost
19 weekly the last couple months. And I know Chloe Brantly of
20 my staff who drafted the interim was on the phone I believe
21 with you Rachel, maybe not, someone from FERC. Someone from
22 FERC pretty much daily while she was developing it to make
23 sure that it was meeting what Rye needed, meeting what FERC
24 needed.

25 So again, kind of just going off what Carrie

1 said, having a lot of communication as early on as possible
2 and as frequently to make sure that everybody was clear on
3 what was needed and what was being developed, so we weren't
4 going back or wasting any time.

5 MS. MCNAMARA: Thank you. David?

6 MR. HAMILTON: So we had -- I think we had plenty
7 of time as far as our role in the FERC licensing process. I
8 would mention I guess where the rubber meets the road as far
9 as we're concerned would be a lot of it has to do with post
10 licensing.

11 We're looking primarily at two things as the dam
12 owner in this situation. One, how it affects other
13 constituents that use that water. In this case, we've got a
14 fairly large city that uses that pool that's supplied by
15 that dam. The lock itself has been closed. There's no
16 recreational or commercial navigation that uses that lock.

17 So primarily we were interested in how the
18 operation of the plant would affect water supplies
19 specifically. And then secondly, as far as the construction
20 goes structurally how it will impact the rest of the
21 structural, the lock and the dam and the integrity of it going
22 forward.

23 So a lot of that isn't really dealt with too much
24 up front in the FERC process. A lot of that will be dealt
25 with in the lease agreement with the language that's put in

Page 30

1 there. In this case, it will probably go for a little
2 longer review of the structural plans, just because it's a
3 little more invasive than what were originally thinking as
4 far as just going right in the lock chamber in this case or,
5 you know, taking out one of the lock walls. But getting
6 back to the time frame, as far as our role in the FERC
7 process, we didn't have any issues with that.

8 MS. MCNAMARA: Thank you. And Ramya, you
9 specifically, would you like to comment on any challenges
10 that you faced in completing your studies in the time
11 allotted or in collecting any of the agency requested or
12 recommended information during pre-filing?

13 MS. SWAMINATHAN: Yeah, absolutely, I'd be happy
14 to. I want to just start just by saying that I, you know,
15 fully agree with the comments of my fellow panelists. I
16 think there's a lot of communication that helped move things
17 and meet deadlines. And part of what I said in my answer in
18 my response to the earlier question I think speaks directly
19 to that having a very clear process plan with clear target
20 dates helped everybody galvanize around those dates so that
21 we knew what we were communicating about for what date with
22 what goal. And I think that is an incredibly helpful level
23 setter in terms of expectations. Having clarity as I said
24 also earlier on the number and the scope and the type of
25 studies was also extremely helpful.

1 In terms of challenges, I think certainly, and
2 you've heard from the stakeholders in this case about some
3 of the challenges. You know, we were not at a final design
4 stage. You know, so we had to with great flexibility on the
5 part of the Commonwealth, you know, come up with a process
6 that worked for the particular requirements we needed.

7 There was snow cover, which impeded some of the
8 terrestrial studies that was unusual and late. And we turned in
9 parts of certain studies with, you know, requests for
10 extensions of time and a real appreciation for the
11 flexibility of the resource agencies, but also FERC staff in
12 reviewing parts of the studies that were available, but not
13 the field work that was precluded by the snow cover.

14 And I think those were the primary challenges,
15 but I think everybody was very willing to work through them.

16 MS. MCNAMARA: Thank you. Are there questions or
17 comments from the audience about the pre-filing consultation
18 or study process? Yes? Please make sure the microphone is
19 on and state and spell your name for the court reporter?

20 MR. LITTLE: Thank you. Is it on? My name is,
21 excuse me, William Little, L-i-t-t-l-e. And with respect to
22 the period of time and the conduct of studies, I wondered if
23 there were -- they've been spoken about fairly generally.
24 And I wonder if there were any particular individual studies
25 that put more stress on meeting deadlines or perhaps were

Page 32

1 more of a challenge to complete within your expected time
2 frames. And I guess if not, what do you think might have
3 been the winning points that allowed you to keep that within
4 the envelopes of your deadlines?

5 MS. MCNAMARA: Ramya, I'll send that to you
6 first.

7 MS. SWAMINATHAN: I was going to say I presume --
8 that's directed at me at least partially. So I think we've
9 touched on some of the challenges specifically on the
10 terrestrial studies and that was really some weather events
11 that left significant snow cover on the ground very late.
12 So it precluded some terrestrial surveys from being fully
13 completed in terms of the challenge.

14 I think in terms of the other studies, they're
15 actually from our experience licensing the Kentucky 11
16 project relative to the projects that we've done that were
17 not in the pilot process, the studies that we did were
18 fairly consistent. We've done the same suite of studies on
19 the other projects as well, which are also new hydro
20 projects and nonpowered dams, but they're in different
21 jurisdictions in some cases with potentially different
22 impacts depending on the design as well as the existing
23 condition.

24 So I think, you know, we were able to leverage
25 some of that experience. And we did not have trouble

1 meeting that schedule other than the specifics of what we've
2 said before, which is there were some snow cover.

3 Certainly, we're not in a position to provide final design,
4 but other than that, we did not see any challenges.

5 MS. MCNAMARA: Ramya, would you mind just letting
6 folks know which -- what type -- what studies you all did
7 for this project, just I think that might be helpful if you
8 remember?

9 MS. SWAMINATHAN: I couldn't guarantee that my
10 memory would be terrifically accurate, but we certainly did
11 a hydraulic study. We did cultural resource work. We did
12 fish entrainment studies. We did terrestrial surveys,
13 including or presence absence as Carrie referenced. And I'm
14 sure there are others. And I can certainly follow up, but I
15 don't remember offhand.

16 MS. MCNAMARA: That's fine, thank you. Carol, I
17 see your question. Before we take your question, I'd like
18 to -- okay. Okay. Why don't you go ahead and ask your
19 question. I'm sorry I'm getting back to you.

20 MS. ALLISON: Actually, Rachel, before we -- can I
21 add something to that response before?

22 MS. MCNAMARA: Yes.

23 MS. ALLISON: Because this is think where it gets
24 back to that early coordination. So some our restrictions
25 for presence absence surveys, they're entirely biological.

Page 34

1 And there's nothing we can do about that. So if you need to
2 do a plant survey, we can't do it in the middle of the
3 winter, because the plants aren't there. And if you need to
4 do a bat survey, we can't do it in the winter, because
5 they're in their caves and they're not on the landscape.

6 So coming to us early so that we can let you all
7 know what species could be present and then at what time
8 frames you can do a presence absence survey, because they're
9 nothing worse than, you know, in January, somebody wants to
10 move forward, but we have unaddressed presence absence with
11 plants. And you can't survey until March or April. And so
12 it puts a lag on things. So coming to us early and not only
13 getting the species list, but if you choose to do presence
14 absence surveys, when those surveys can be done is key.

15 MS. MCNAMARA: Thank you. Other panelists, do
16 any of you have any additions? No. Okay. Carol, go ahead.

17 MS. WASSERMAN: At the risk of monopolizing you
18 all, I believe this is more appropriate to the FERC folks,
19 the three areas that consume a tremendous amount of time and
20 cost are listed species studies for exactly the reasons that
21 were described. You might have more than one season,
22 historic preservation, water quality certification with the
23 state.

24 While I certainly appreciate the value of taking
25 those three generally lengthy processes and effectively

1 pulling them post licensing instead of pre-licensing,
2 investors would have a lot more reassurance. You've got the
3 license in hand. And I understand what that does for up
4 front capital.

5 The question I had for FERC is given that these
6 were interim or conditional approvals, how would that
7 translate into a regularized license process if this were
8 not a pilot project. How would that be incorporated into a
9 regularized process? Would the Commission continue to use
10 interim conditional concurrences? I just don't understand
11 how that works once you take it out of the laboratory as it were
12 --

13 MS. MCNAMARA: Thank you, Carol. I am going to
14 direct this question over towards John or Vince, if one of
15 you would like to respond.

16 MR. YEARICK: This is Vince Yearick, director of
17 Hydropower Licensing. I think the answer to that question
18 is we're still trying to figure that out. Just -- the
19 primary purpose of having the workshop and I think you will
20 -- the best answer to that will be in our report to
21 Congress.

22 So and there are certain things that we have to
23 do in order to get through the licensing process. You know,
24 we have to do consultation under ESA and we need a water
25 quality certification. So, I mean, those are kind of

Page 36

1 minimal bars. And then we have to do a reasonable analysis
2 under NEPA.

3 Other than that, what we, you know, do or whether
4 we can implement this on a programmatic scale, I think,
5 remains to be seen.

6 MS. MCNAMARA: Thank you. Before I move on to
7 the next question, I just want to make sure, are there any
8 questions from the audience? Dustin, are there any
9 questions from the phone?

10 MR. HAHN: No questions at this time.

11 MS. MCNAMARA: Thank you. Panel, before we move
12 on to the next question, we'd like to recognize Chairman
13 LaFleur, who's stepped in.

14 CHAIRMAN LAFLEUR: Well, thank you very much. I just
15 wanted to say a couple things. I'm sorry that I missed the
16 beginning of the session. I had a longstanding commitment
17 to a DOE thing this morning. But I think it's -- this is an
18 important day to try to learn the lessons that we can from
19 our experience with the pilot process.

20 Congress doesn't touch the Federal Power Act very
21 often. And in 2013 was the first time -- first thing they
22 did since I had been on the Commission. I know the Senate
23 Energy Committee did a lot of work to make this happen and
24 our FERC's own Dan Adamson was one of the authors.

25 And it's important that we properly implement it

1 and try to achieve the purposes, which is really to foster
2 more hydro development. We all know there's a tremendous
3 number of dams that don't have hydropower that are not
4 presently used for hydropower. And it's a high potential,
5 carbon free, dispatchable, flexible, and reliable resource.

6 So hopefully, we can really dig in and learn the
7 experience that the folks from Kentucky and Rye had with the
8 pilot so that we can figure out a realistic process to
9 expand it to a more reasonable number of projects while
10 still living within the way the Congress gave us the law.
11 So thank you all for being here. And I look forward to
12 hearing what you have to say.

13 MS. MCNAMARA: Thank you, Chairman LaFleur.
14 Okay. Panel, back to -- back to your questions. Just want
15 to make sure I'm coordinated with my slides. For our agency
16 staff, do you -- are there any limitations on your agency's
17 ability to sustainably process expedited licenses for
18 multiple projects? So we're thinking if we were doing more
19 than one of these pilot type projects, how would that work
20 for your agency? I'll start with Stephanie.

21 MS. HAYES: Sure. So this is kind of going back
22 to the question that was just posed over whether or not an
23 interim certification is going to be useable for FERC or
24 worthwhile as far as time constraints being that they still
25 have to get a final certification and still have to go

Page 38

1 through all the same processes in order to get that.

2 However, if it was deemed, which is how I'm going
3 to go with it, if it was deemed useable, because we covered
4 all of our bases with Rye and with this interim
5 certification at this time, I don't see why we couldn't
6 apply those to other projects because we truly looked at
7 this as an overarching general idea as far as covering
8 everything we could possibly think of, not just for lock
9 and dam 11, but for our normal hydro projects in general.

10 So I definitely see us doing modifications
11 possibly to the process, depending on what this workshop
12 concludes with, depending on what issues we see as we
13 continue with Rye to get this project off the ground, but I
14 just see those as modifications. If we decide the interim
15 route is something that's feasible and something we want to
16 continue doing, I don't see that it would be hard to
17 implement on multiple projects.

18 MS. MCNAMARA: Thank you. Carrie?

19 MS. ALLISON: Sure. So it's difficult for me to
20 speak on because we have different field offices in every
21 state and every field office has a different workload.
22 For us individually, and I'm going to have to go ahead and
23 admit, because I came into this project late, I actually
24 wasn't aware that it was on a pilot program, fast track. I
25 just thought that we had an unbelievably responsive

1 applicant and FERC coordinator I was like, wow this is great.

2 So and once I became aware, I was like, oh, makes
3 a lot of sense now. This project from an ESA standpoint
4 consultation was really straight forward for us. We were
5 able to work with the applicant, put in some avoidance and
6 minimization measures, and get to not to a likely to
7 adversely effect.

8 However, if that weren't in the case, if we were
9 to end up with a likely to adversely affect determination
10 for the species, formal consultation is a pretty involved
11 process. From start to finish, it can take a 135 days. So
12 if we couldn't get to a "not likely to with avoidance and
13 minimization measures, then I could see where some of these
14 projects could be pretty cumbersome on a field office." We
15 wear a lot of different hats in the office. And so, maybe
16 responding to the time frames would be a little more
17 difficult for us.

18 But again, when you get back to the type of
19 coordination that we had on this, I think, you know, early
20 and frequent is the real key.

21 MS. MCNAMARA: Thank you. Jennifer?

22 MS. RYALL: For our office, like I said earlier,
23 we're tiny. We're stretched pretty thin. And so, our
24 office is structured that we have three Kentucky
25 transportation cabinet liaisons. We get a lot of Kentucky

Page 40

1 transportation projects. And that's -- can be pretty common
2 for other SHPOS across the state or across the nation,
3 I'm sorry.

4 So I'm not sure about our ability. We sort of
5 talked about this before I came here. I'm not sure about
6 our ability to handle a number of these where we're
7 prioritizing everything. Obviously, we have other agencies
8 that have fast track projects as well.

9 So I think that would stretch us pretty thin. I
10 don't know if there's other states that might have something
11 like a FERC liaison. That's something that we talked about
12 as a possibility if we had someone that was dedicated to
13 this other FERC project that we see that might become a
14 possibility that we could handle a little bit better, but I
15 realize it's a long shot. But I do think that it would be
16 tough for us right now to take on a number of these types
17 of projects.

18 MS. MCNAMARA: And David, since you have seen now
19 a few FERC license projects on the Kentucky River, do you
20 have any thoughts?

21 MR. HAMILTON: Yeah, I don't think we'd have
22 issues doing multiple projects. In a sense, we've kind of
23 been doing it. Two of them aren't on the fast track, but
24 we're kind of dealing with three current licensing projects
25 right now. But I -- as a rule of the owner of this process,

1 I don't see any issues going forward with that multiple two
2 year programs.

3 MS. MCNAMARA: And Ramya, do you have any
4 thoughts on the challenges or limitations that fast tracking
5 projects would have for you or I guess, you know, benefits
6 to you? If you would like to speak to that.

7 MS. SWAMINATHAN: I think from our standpoint,
8 the two year process really is a benefit and a virtue
9 towards planning and certainty. We say all the time from an
10 investor's point of view, that a process, the best kind of
11 process would be short and certain. A long and certain
12 process is all right. It's tolerable, but a long and
13 uncertain process is not financeable.

14 And so from our perspective, having the process
15 be clear, transparent, sent out ahead of time with dates,
16 even when we had to work very hard to meet those dates meant
17 that we could do our planning in order to make sure that we
18 did whatever we needed both from a field work perspective,
19 from an information needs perspective, from making sure that
20 everybody who needed to know did know what they needed to
21 know. So from our perspective, it was really a virtue.

22 MS. MCNAMARA: Thank you. Are there any
23 questions from the audience regarding the agency's
24 limitations on pursuing or processing or I guess the
25 applicant's pursuing the process or the agency's processing

Page 42

1 applications in a shortened time frame? Seeing none, Dustin
2 are there any questions or comments from the phone?

3 MR. HAHN: No questions at this time.

4 MS. MCNAMARA: Thank you. So this is the last
5 question that I'm going to direct to every member of the
6 panel. Ramya, I'll start with you and work around. For the
7 first part of the question, how should the Commission
8 measure the effectiveness of this two year process?

9 MS. SWAMINATHAN: Well, I think the shortest
10 answer to that question was that it was done successfully.
11 And that seems to me to be very effective measure.

12 MS. MCNAMARA: David?

13 MR. HAMILTON: No real good ideas yet. And kind
14 of like what you're doing today, just getting feedback from
15 all entities involved.

16 MS. MCNAMARA: Stephanie?

17 MS. HAYES: I would say now, yes, it was
18 effective considering that we did get it done. I would say
19 on our end, though, it was a very close call. But I think
20 now, because of the communication the first time around and
21 what we got from this workshop, depending on what the
22 outcome is, I think we could do it much more effectively
23 next time. So I would say it was effective, but could be
24 improved upon next go around.

25 MS. MCNAMARA: And Carrie?

1 MS. ALLISON: Yeah, I agree with what Stephanie
2 said. One of the things for us that was great about the two
3 year process is that species surveys have -- they have a
4 lifetime to them. And so, a lot of times when we're going
5 to through the regular process, you'll have done a species
6 survey and then three years rolls around and we're like
7 we're going to have to do it again because the survey had
8 expired.

9 So when we fit everything into that two year
10 process, and even though Rye had to deal with, I think we
11 had a species that was a candidate that went from listed.
12 And then we had the northern long ear bat that was listed
13 during their process. So even in that short two year
14 window, they still had -- because biology constantly
15 changes.

16 But when you're getting all of the information in
17 two years, for us, I just felt like we were able to use the
18 best science available, which is always our key. And then
19 really put effective avoidance and minimization measures in
20 place because we had all of the up to date information in
21 one place. So for us, I felt like it was a real success.

22 MS. MCNAMARA: And Jennifer?

23 MS. RYALL: I feel like I guess as far as
24 effectiveness, then there's two kind of it's like effective
25 for FERC or effective for all of us. So for me, the

Page 44

1 effectiveness I guess is a satisfactory outcome of the
2 project. I think that those two things are so closely tied
3 together. And we're not fully there yet. So I'm kind of
4 reluctant to comment on effectiveness until we actually
5 reach the end of like the Section 106 process. But it seems
6 like for you all, that you know, meeting the two year goal
7 was very effective, so.

8 MS. MCNAMARA: Do any of the panelists have any
9 additional thoughts on this? Okay, Stephanie?

10 MS. HAYES: Yeah, I just kind of want to go off
11 that as well. Basically, as far as two years, yes, it was
12 effective, because we hit it. But again, because ours is an
13 interim, I don't want to say yet that yeah, go forth with
14 all of them because I don't know yet how that's going to
15 look, but I think that's kind of in general what we've seen
16 any way. Just we won't know the final out come until Rye is
17 able to get in the ground.

18 MS. MCNAMARA: Okay. Thank you. Any other
19 thoughts? We will have a more general comment period in
20 just a few moments. Audience members, are there any
21 questions regarding this? Just a reminder, please turn the
22 microphone on and state and spell your name.

23 MR. BROWN KINLOCH: Yes, my name is David Brown
24 Kinloch. Last name is Brown like the color and then
25 Kinloch, K-i-n-l-o-c-h. As far as measuring the

1 effectiveness, I think you have the perfect project here.
2 Because you can measure it against a conventionally
3 licensed project.

4 Mr. Hamilton has mentioned a couple other
5 projects. We just finished licensing lock and dam 12 and
6 lock and dam 14 on the Kentucky River, which are just
7 upstream from lock and dam 11. So you have a perfect apples
8 to apples comparison of the two licensing processes. This
9 is a two year process. From the time that we apply for a
10 preliminary permit, to the time we got our license was
11 seven and a half years. So you have a very good comparison
12 there.

13 I have to second a lot of the things that were
14 said here. I can tell you that what Mr. Hamilton said, I
15 made three different presentations to the board of the
16 Kentucky River Authority, because the board keeps changing
17 during that seven and a half years.

18 I started working with the Kentucky Heritage
19 counsel with one person. Then I went to Jill Howell. And
20 she left. There was another woman that came in. And now
21 Jennifer is there.

22 I worked with someone before Carrie. Carrie took
23 on the project. Another person came in. I worked with him
24 for a number of years. The day that we got final
25 approval from them is the very day he left and Carrie

Page 46

1 took back over. Okay. We don't have them here.

2 There are five agencies in Kentucky that are
3 active in this. You've got four up in here. The other one
4 is Kentucky Fish and Wildlife. Same thing with that, we
5 have been through three different people. I know just in
6 the last month, we changed. And we've got a fourth person
7 now at Kentucky Fish and Wildlife. Every time there are
8 changes, I have to go and start from scratch with people
9 that haven't heard of our projects, reeducate them. And it
10 takes a long time on the exact same project.

11 So a two-year process would be a blessing especially,
12 especially a place like Kentucky where one, you have
13 agencies that are overworked. I mean, my biggest problem in
14 licensing in Kentucky is getting a meeting with the agencies
15 because these folks are so overworked.

16 Stephanie's person under her, Joyce Brock , I
17 work with all the time. She says I don't have time to meet
18 with you. My recent meeting with her, I don't have time to
19 meet with you. I'm dealing with mountain top removal. I'm
20 dealing with over burden put into blue line streams. I
21 have coal ash ponds collapsing. I have acid drainage from
22 coal mines. And what you're doing putting hydro on an
23 existing dam, run-of-river is minor compared to what I do.

24 So my biggest problem is even getting the
25 agencies to be able to get to a meeting, not because they don't

1 want to come. So because they're so overworked.

2 So I think the perfect comparison, you're --
3 whether you can see if this is an effective process or not
4 is compare what was done as lock 11 by Rye to what we went
5 through at lock and dam 12 and lock and dam 14 and the seven
6 and a half years we went through on projects, which we
7 provided in our license application in 2012 a memorandum of
8 agreement from the agencies saying that they were in
9 complete agreement on each of the issues that was laid out
10 and how everything should be in a license. And it still
11 took from 2012 to the end of 2015 to get the license. So
12 there you have it.

13 MS. MCNAMARA: Is there anyone who wants to
14 provide any response or additional questions? Yeah, please
15 state your name and affiliation and spell it for the court
16 reporter, your name?

17 MR. JANKEL: Hello. My name is Paul Jankel. I'm
18 from England, expressly Scotland. Company's Aquanovis. If you're
19 going to compare sites within the country, you should also
20 look abroad. We had a very, very intense industry in
21 Scotland. We had two people to deal with. Scottish
22 Environmental Protection Agency, water, and then Scottish
23 National Heritage. Everything else, 12 months.

24 And to the point Ramya is making, look at India.
25 All of the money that we're trying to bring here, people

Page 48

1 want to take to India or Brazil. Why? The time. That's
2 what I have to say.

3 MS. MCNAMARA: Thank you. Stephanie would you
4 like to speak.

5 MS. HAYES: I did just kind want to go off the
6 first comment made. Kentucky currently right now just had
7 myself and Joyce for about six months, where we normally
8 have a staff of seven. So hopefully, that'll get a little
9 bit better. But going off of that, though, I do think
10 that's a valid concern because we have been seeing a lot of
11 turnover within the state agencies being cut smaller, I know
12 SHPOS had issues with that.

13 And on top of that, too, a younger staffing.
14 People have a little bit higher -- it's a bigger learning
15 curve. They're coming in with maybe not less knowledge, but
16 just maybe not directly, you know, associated. Most of my
17 staff, when they come in, have never done anything with an
18 FERC project. So they are hitting the ground running with
19 these. And so, I definitely see, yes, when we come in, I
20 was the same way. When we come in, they're having to start
21 with scratch from us. Not just with the project, but
22 possibly with FERC as an idea. So having a quicker process
23 can help with that aspect.

24 MS. MCNAMARA: Thank you. Go ahead since it
25 sounds like we're moving into the kind of more general

1 questions and comments. If you have questions and comments
2 for this panel, now would be the -- now would be an
3 appropriate time to ask them. We are having the second
4 panel, which will be discussing the national implications of
5 the two year process. But if you'd like to direct any
6 questions to our panelists now, now is a good time to do
7 that. Okay.

8 MR. YEARICK: Okay, it's still on. Vince Yearick
9 again from Hydropower Licensing. The state mentioned a
10 couple times that the water quality certification is
11 interim. I'm curious regarding -- I'm curious about what
12 you need to get to what you would call a more final water
13 quality certification and if there are any other I think it
14 was mentioned about Section 106 that were not quite done
15 there. So I'm curious as to how close we are to start of
16 construction for this project? What needs to happen to get
17 to the final water quality cert, what needs to get done for,
18 you know, whatever is left under the HPMP.

19 MS. MCNAMARA: Okay, so I guess I will start with
20 Stephanie and then go to Jennifer and then Ramya. If you
21 want to give any updates on the status of the project,
22 that'd be helpful.

23 MS. HAYES.: Okay. So I'm not 100 percent on the
24 environmental studies. I'm not sure if we're at all of the
25 environmental studies needed. I think there's a little bit

Page 50

1 left to go as far as background data.

2 But the biggest thing is what I talked about
3 before. And this would vary by state because this is our
4 state regulations is we cannot public notice a project until
5 we have all of the specifics. Now that's not saying that if
6 something happens during building, that's really common. We
7 do modifications to certifications all the time, but we
8 cannot by law within the state of Kentucky public notice a
9 project without the complete construction plans, the
10 complete construction schedule. All of those factors, site
11 visits and such, which I believe we've done a site visit,
12 but it would be a site visit pretty soon prior to the
13 actual construction.

14 And then with that being said, you know, we do
15 not have a general. There's general certifications of
16 individual certifications. We do not have a general for
17 FERC projects. So everyone has to go the individual and the
18 public notice route.

19 So this could be different with other states.
20 Maybe not, you know, in other states maybe that's something
21 they could work around, but with Kentucky, because that's on
22 the books, we can't ever give a final until we have the
23 absolutely done plans for the project.

24 MS. MCNAMARA: Okay. Jennifer, if you want to
25 just speak about what's remaining with Section 106?

1 MS. ALLISON: Yeah, I can weigh in. Our
2 conditional's a little bit unconditional. We're always kind
3 of conditional. So because we always have that
4 re-initiation clause in ours that if the project ever
5 changes and affects the species in a way that wasn't
6 previously considered, then we ask to re-initiate
7 consultation. So that's in every single project that we do.

8 With this one, I guess calling it a conditional
9 concurrence isn't really correct because even though that's
10 what I called it, because we had data that made us
11 comfortable with the not likely. And their agreement to go
12 in to survey before construction really was just another
13 added avoidance or minimization measure.

14 So we've concurred with the not likely for all of
15 the listed species on this. And we just felt like the going
16 back in to survey before just in case would give us just a
17 little bit more comfort with that determination.

18 MS. MCNAMARA: Thank you.

19 MS RYALL: For the Kentucky
20 Heritage Council under Section 106, so we didn't have the
21 final design for what's being proposed for the dam itself.
22 The dam is eligible under the National Register of Historic
23 Places. We also didn't know what the final route of the
24 transmission lines was going to be. So under Section 106,
25 we're required to identify eligible or listed historic
26 resources. That's basically the first step.

Page 52

1 If we don't know where transmission lines are
2 going to go and things like that, we can't very well
3 identify what's even there. So that it is the starting
4 point of our process. And then the next step would be
5 assessing whether there are adverse effects. There can be
6 all kinds of various adverse effects to those things,
7 eligible or listed.

8 So we didn't have enough information to give a
9 full concurrence at that point. So those are kinds of the
10 things that we're waiting for. Like we literally can't
11 review those things until we know what's actually happening.

12 There was something else I was going to say, too.
13 I guess just kind of going off what you said about, you
14 know, being a small agency and things like that, you know,
15 it's -- it can be tough for us to find time, but we will
16 always try to. If we know things like this are happening,
17 that's where the great outreach that Rachel did early on, if
18 we know these things are happening and that there's tight
19 deadlines, it really, really helps us to know about those,
20 so.

21 MS. MCNAMARA: And Ramya., did you want to add
22 anything?

23 MS. SWAMINATHAN: Sure. I think in response to
24 Vince's question as sort of what's the timeline to getting
25 the project in the ground, as a developer, you're really --

1 you have a bunch of horses. And you line them all up and
2 you hope they get to the finish line at the same time,
3 right? So licensing is one of them. And all the various
4 conditions that we need to meet across all our permitting
5 regimes, including construction permits, et cetera. We
6 need to negotiate a lease instrument. We need to finalize
7 off take arrangements. We need to advance our final
8 engineering design and construction contracting. We need to
9 line up project financing. So we're hard at work on all of
10 them.

11 MS. MCNAMARA: Are there other questions or
12 comments from the audience? I see none. Dustin, are there
13 any questions or comments from the phone?

14 MR. HAHN: No questions at this time.

15 MS. MCNAMARA: Thank you. So I want to thank you
16 all of our panelists for their time and efforts involved in
17 licensing this project. Now as a reminder to everyone here,
18 if you have questions or comments that you were not able to
19 provide about the pilot project, or if you need to depart
20 before our second panel, written comments may be filed
21 through April 14th, 2017. Guidance on how to file
22 written comments is provided in the Commission's January
23 30th notice of the workshop.

24 We've now scheduled a break. And I know that our
25 break was set for 15 minutes, but I believe our panelists

Page 54

1 for the second workshop, one of our panelists will not
2 arrive until 2:30. So I think at this time, we'll just take
3 a break until 2:30 to allow our panelists to arrive. So
4 you'll be able to get lunch instead of just running to the
5 bathroom. So we hope to see you all back. And at this
6 time, I'm going to turn off our mikes and let you all take
7 a break.

8 (Break)

9 MR. HANSEN: All right, we're going to start the
10 second panel now. Let me reintroduce myself. My name is
11 Ryan Hansen. I'm a fisheries biologist in the northwest
12 branch of the division of Hydropower Licensing. I'm also a
13 member of the small hydropower team here as FERC. And I
14 worked on the licensing of the Kentucky River lock and dam
15 11 project.

16 Before we start, I want to again remind everyone
17 to please turn off your cell phones because if they're on,
18 they can cause interference with our audio equipment. So
19 please remember to do that.

20 And I'd also to reiterate what Tim said prior to
21 the first panel that today, we're only talking about the
22 effectiveness of our tested two year pilot licensing
23 process, as well as programmatic level discussions on the
24 feasibility of this.

25 So while we can discuss the effectiveness of the

1 process for completed projects, please avoid from discussing
2 any pending cases or the merits of them. Thank you.

3 So we're going to shift focus a little bit now.
4 And we're going to discuss the practicability of
5 implementing a two year process on a programmatic scale.

6 First off, I want to thank you all of the
7 panelists for their time. They've been very generous. And
8 I'd like to thank you them in advance for their careful
9 consideration of the questions that we're going to be
10 discussing this afternoon.

11 We'll start by allowing to them to introduce
12 themselves. So we're going to start with Mrs. Wasserman.
13 And then we'll go around the table in a clockwise fashion.
14 Let them introduce themselves to you.

15 MR. BORGQUIST: I am Carl Borgquist, president
16 and CEO of Absaroka Energy. And just for reference, we are
17 the project developers of the Gordon Butte closed loop pump
18 storage project in Montana.

19 MS. KOERNER: My name is Mona Koerner. I'm with
20 the United States Forest Service. I'm the program manager
21 in the Washington office for hydropower for the national
22 forest system.

23 There's over 200 licensed FERC projects on
24 national forest land. There's over 30 exempted projects on
25 national forest land. And there's a number of pending

Page 56

1 preliminary permits. Forest service land tends to attract
2 hydropower because it's got topography and water. About 80
3 percent of the United States drinking water originates on
4 national forest land.

5 MS. KLEIN: Good afternoon, everyone, I'm Amy
6 Klein. I'm the U.S. Army Corps of Engineers headquarters
7 regulatory program manager. I'm the energy point of contact
8 for regulatory. So my work is focused on Section 10 of the
9 Rivers and Harbors Act and Section 404 of the Clean Water
10 Act.

11 If you have any questions on Section 408
12 permitting, I know Kyle Jones is here in the audience. So I
13 will direct all questions regarding to that to him so he can
14 answer. And for those of you, since I know there's a
15 hydropower community folks here, Kamau Sadiki the Corps'
16 hydropower program is retiring at the end of April just so
17 you're aware of that. If you need to reach out to him
18 sooner rather than later, it is probably recommended. So
19 looking forward to talking to you all today. Thank you.

20 MR. LITTLE: Good afternoon and thanks very
21 much and to the Commission as well. My name is Bill Little.
22 I'm an attorney in the office of general counsel at the
23 Department of Environmental Conservation in Albany, New
24 York. And we are the water quality certificate certifying
25 agency for New York state. And I work with a staff of

1 attorneys and qualified regulatory experts in fish and
2 wildlife, water, and other disciplines who will work with
3 applicants in the forthcoming what we call tsunami of
4 re-licensing applications that New York state faces. And
5 actually, we're looking forward to it. And this discussion
6 here may just fit it in as a very timely factor. Thank you.

7 MR. O'KEEFE: So I'm Thomas O'Keefe. I'm the
8 Northwest Stewardship Director for American Whitewater.
9 And the same high gradient rivers that attract hydropower
10 development, attract white water paddlers.

11 I serve as the chair of the hydropower reform
12 coalition nationally, which is a diverse consortium of 160
13 organizations around the country. And we have an interest
14 in restoring rivers impacted by hydropower dams. And
15 personally, I've been involved in hydropower licensing for
16 about 20 years and have been personally engaged in several
17 dozen hydropower licensings throughout the country. Thanks.

18 MR. HANSEN: Thank you very much. So we'll move
19 on to the first question. The first question posed to the
20 panel has to do with the criteria for projects and FERC
21 solicited possible projects to go through this process. And
22 I realize that at no place did we list these for the
23 audience. So I'm going to -- if you don't mind real fast,
24 just read the criteria that we were required for a project
25 to be considered for a pilot project.

Page 58

1 "The project must cause little to no change to
2 existing surface and groundwater flows and uses. The
3 project must be unlikely to adversely affect." Federally
4 listed threatened and endangered species.

5 If the project is proposed to be located at or
6 use a federal dam, the request to use the two year process
7 must include a letter from the dam owner that the
8 applicant's plan of development is conceptually feasible, if
9 the project would use any public park, recreation area, or
10 wildlife refuge established under state or local law,
11 request -- excuse me, the request to use the two year
12 process must include a letter from the managing entity,
13 indicating its approval of the sites used for hydropower
14 development.

15 And finally, for a closed loop pump storage
16 project, the project must not be continuously connected to a
17 naturally flowing water feature.

18 So now that we revisited those, and they're fresh
19 in your mind, I want to talk about those criteria. So were
20 the criteria in FERC's notice soliciting pilot projects
21 reasonable and practicable? Let's start. I'd like to
22 direct this to Mr. Borgquist first.

23 MR. BORGQUIST: I think the conditions were
24 reasonable. As you may know, we were asked to consider
25 being the pump storage close loop pilot. We declined

1 respectfully to do that for the following reasons. We
2 directed not at FERC or staff. We did not want to run the
3 risk of being involved in a sort of uncharted public process
4 in the pilot program.

5 And that again because we're privately funded,
6 unnecessary risks need to be avoided by me and my team as
7 much as possible. Nothing wrong with the criteria and in
8 fact we worked with Jennifer and Vince and that team trying
9 to figure out offline how to expedite this process as much
10 as we could. And we offered to do that. And that was a
11 sort of a heartfelt discussion and work product that came
12 out of the Gordon Butte licensing regime.

13 MR. HANSEN: Ms. Wasserman,
14 were any of the criteria or sorry were the criteria
15 reasonable and practicable?

16 MS. WASSERMAN: I'm sorry. I think that the
17 criteria restated a series of obvious components. Roughly
18 they can be broken into two categories. Impact analysis and
19 process.

20 I think if you have sufficient information and
21 to quote from a very old British television series from the
22 Prisoner, what is the key? The key is information. And all
23 of the impact criteria that you describe little or no change
24 to surface or groundwater, listed species. Those are
25 impact. But it's really going to turn on how much
26 information do you have for somebody say at Fish and

Page 60

1 Wildlife to get to their no action. And you don't need to
2 break it out by specific environmental medium or species.

3 So you had one set that was in impacts. The
4 other was process. That is the property rights, the
5 ownership in the event that you have federal dams involved.

6 The criteria refined, I think they could have
7 been reduced to those two. And I think there could have
8 been one more added. And that would be the extent to which
9 initial consultation work feasibility, work prefilng work,
10 however you care to characterize it, has been sufficient so
11 that you can come to this at the point where you'd be ready
12 to go with a PAD or an ICD. They -- that's not clear from
13 this, but it really comes down to how early are you doing your
14 own consultative work? And is that going to pass muster
15 rather than breaking them out into each individual
16 criterion? It is all about information.

17 MR. HANSEN: I do believe the original
18 solicitation did -- any application for the process did
19 request documentation that's consultation had at least started.
20 So it was pointing towards that.

21 Ms. Klein, how do you -- did you feel like the
22 criteria we're reasonable and practicable from your point of
23 view?

24 MS. KLEIN: You know, there are, from -- you
25 know, from the list to me again, those are very standard if

1 you're looking for a no or a low impact project. And that's
2 what regulatory is really focused on as well. You know,
3 what are the impacts to the aquatic resource. And so, those
4 criteria from our perspective makes sense if you're, you
5 know, if you're operating it, if the criteria are being met
6 regarding flow, then that means the impacts were probably
7 authorizing are relatively minor. So to me, that's a
8 criterion that would make sense. And would be -- that's
9 really our focus.

10 The impacts to endangered species and everything
11 else will come into our review, but I think that was
12 probably a good way at getting to what our program would
13 ultimately consider.

14 MR. HANSEN: So on the other side of the coin,
15 did the criteria impose any unnecessary limits? And along
16 with that, did you think that there should have been
17 additional, different, or no criteria? And I want to back
18 up again and start with Mr. Borgquist.

19 MR. BORGQUIST: I understand why these questions
20 are coming in the forefront of the report you need to write.
21 I just think for a -- I'm going to come back to this. There
22 was nothing about the criteria that put us off, nothing
23 about what staff had to say about any of that, that put us
24 off. It just seemed like it was an unnecessary question
25 mark that we weren't willing to tackle, you know, with this

Page 62

1 project.

2 This sort of feeds into a comment I wanted to
3 make to the group that doesn't really get to your question,
4 but it's a philosophy that we brought to bear in the
5 licensing process we went through with FERC, which was we
6 did a TLP kind of modified, I would say. Where we worked
7 with FERC to try to figure out timelines and a process and
8 an overall approach that could get this thing licensed as
9 fast as possible.

10 But I really believed it was correct for us as
11 developers to have our hands firmly on the controls of how
12 this was going to go. And that's important -- most
13 important in managing the stakeholders.

14 Because FERC, we interact with FERC on this
15 higher level. But back at the local and state level, we
16 have lots of relationships that we have to manage. And
17 sometimes the timing of that is critical. And the idea that
18 we're responsible, not FERC, we're making the decisions, if
19 things go badly, it's our problem and our responsibility.
20 And so this whole business of the pilot and other ways that
21 take our hands off the wheel and so that we're not
22 commanding the ships, so to speak, we try to resist or we've
23 resisted.

24 MR. HANSEN: Ms. Wasserman, as the developer, do
25 you feel the criteria impose any unnecessary limits or that

1 should have been additional or different ones?

2 MS. WASSERMAN: I don't believe that the criteria
3 imposed excessive limits or constraints. I do think that
4 the criteria didn't take a look at some of the things that
5 developers do have to look at.

6 We've all been talking about it. In order to have
7 sufficient information, you need investors who have some
8 certitude that you were going to get a license and you were
9 going to get it in less than five years, seven years, what have
10 you.

11 But to that end, the criteria also -- just repeat
12 essentially the same. We need impact analysis. We need
13 process analysis. So they weren't constraining, but I would
14 bring that to any project that we were developing. We
15 initially thought about the pilot project program. We
16 concluded we're doing this in two years and two and a half
17 years respectively without a pilot project. We're doing it
18 within -- we ended up going the exemption route, but we had
19 no difficulty doing that.

20 A key to that is again, a comment Carl just made,
21 when we began initiation our developments, the first people
22 we went to were the safety DEPs, and the state wildlife
23 agencies. We were going to get a very clear sense from
24 them. They're not as familiar as the federal agencies with
25 what is going to be expected. And if there are going be any

Page 64

1 early warning items or extra information particularly under
2 something like a 401, where the state does control, you need
3 to know that before you go any further. They're the people
4 you're going to work with most closely. They are either
5 going to be your advocates or stay out of the process with
6 the federal agencies. And I find that that really was not
7 emphasized here. And I think it could have been.

8 I will say I have a certain partisan view. My
9 company uses one form of innovative technology. We don't go
10 for big dams. We use a process that allows us to
11 demonstrate things like impact fairly quickly and fairly on
12 -- having said that, it only works at certain areas. We use
13 an Archimedes screw generator. And that's not
14 applicable.

15 We have 8,000 nonpowered existing dams in New
16 England. Virtually -- which is where I come from.
17 Virtually every one of them is historic. We are currently
18 working on projects in the Delaware and Lehigh Valley in the
19 Blackstone National corridor. And all of those projects are
20 -- they're fairly straight forward in terms of your
21 criteria, but the local and the state involvement in those
22 is intense. And there's no mention of that here.

23 MR. HANSEN: I'd like to ask the rest of the
24 panel about the criteria, about -- is there reasonableness
25 or their unreasonableness. Ms. Koerner, do you have

1 anything to add?

2 MS KOERNER: Well, unfortunately, the -- or
3 fortunately, the pilot project was not on national forest
4 land. So we were not engaged in that particular project.
5 And I did not see that I think there was one other applicant
6 was not on national forest land. So there was not the
7 federal land issue.

8 The Forest Service filed comments following the
9 first workshop. We expressed concern that there's a very
10 short time for FERC staff to determine the applicability of
11 this process for those who seek to use it. Given the
12 criteria, we made some suggestions for more fine-tuning the
13 criteria. It's -- a lot of that criteria, one could assert
14 that that is the case, the positive case, but where is the
15 proof? And that's mostly the issue. I don't know if I
16 would call it information, but that -- on that order. There
17 is not enough specific information or enough handholds, I
18 think, for a licensee or an applicant to actually provide
19 what the Commission needs to know in order to make a
20 decision in 15 days.

21 MR. HANSEN: Mr. Little, do you have any comments
22 on the criteria?

23 MR. LITTLE: Yes, thank you. I think that
24 they're effective in principal. And I would agree with
25 what's been said here about the -- you know, these are

Page 66

1 presented at a certain level.

2 And one of the keys, to me, I sort of looked a
3 little bit past them to the fact that you're -- that this
4 also discusses the need for consultation, which is from a
5 certifying agency's perspective, or at least our agency,
6 that's really the meaningful event is the commencement of
7 any kind of consultation. And these criteria would
8 ordinarily be on the table and with the intention that we
9 know the discussion for perhaps ultimate settlement.

10 Mitigative efforts is on everyone's mind.

11 This is the -- this language is the introduction
12 to that entire series of events. And so I -- I think it's
13 encouraging. And the compression of time is what to me has
14 provided more urgency to this. Not that we're not
15 experienced with it, not we don't want to encourage it, but
16 compression does bring about a certain heightened risk with
17 it.

18 And I would say that's the kind of thing that
19 wasn't -- the door wasn't -- it wasn't mentioned here. What
20 was, you know, asking would you while you're appreciating
21 the process bring along with it, you know, what might be a
22 -- the frustrating elements of it. We're hearing about it
23 today, but I'm not sure it at the time it was issued, that
24 it asked people to keep a mental log of that as well.

25 That being said, I think the discussion earlier

1 this afternoon was very productive in that it shows us how
2 it works and how it work will work in a good, you know, or
3 favorable situation. My only thinking, and it goes to what
4 I was just saying, is that, you know, what are we supposed
5 to do with this when it may -- when it has a greater
6 propensity to failure or frustration, if not failure?

7 And, you know, that's where it again falls back
8 to the consultation process. And I think I was in this room
9 years ago when we were working on the ILP and talked a great
10 deal about front loading. And which was ultimately built
11 into that. We, by the way, took that back to New York state
12 and built that into some of our processes and it's been
13 successful.

14 So the element of front loading, I think, is
15 mentioned here. And I would have probably made more of it
16 and asked people what they would want to add to it.

17 MR. HANSEN: Mr. O'Keefe, any comments on the
18 criteria?

19 MR. O'KEEFE: Yeah. So just a couple of thoughts
20 is one, just holistically, I mean, we support opportunities
21 to implement hydropower on dams that are used for, you know,
22 navigation flood storage, flood control storage. And it's
23 important to us to have efficiency in the process where, you
24 know, there's projects that a site is appropriate for adding
25 hydropower on an unpowered dam. I mean, a faster process is

Page 68

1 of interest to those of us in the NGO community.

2 I would say, you know, criteria makes sense.

3 They're important. The words on the page matter in
4 establishing the privilege to use the accelerated process
5 that's outlined here is important.

6 I think, you know, the short timeline to make the
7 determination, you know, is somewhat of a concern. And
8 what's the exit strategy if, you know, if this process turns
9 out to be not an appropriate as you're running resource
10 issues? And with only, I mean, the challenge we have before
11 us is with only one project, you know, going through this
12 pilot program, it's still a little bit difficult to game all
13 that out. So those are my thoughts on that.

14 MR. HANSEN: And then back up, Ms. Klein, do you
15 have comments on perhaps the criteria imposing unnecessary
16 limits or if there should be different ones?

17 MS. KLEIN: You know, I don't. I don't have any
18 comments on what FERC chooses to include as its criteria for
19 its process.

20 Now I do think one of the risks we see more often
21 for the regulatory program is that very often developers
22 either don't realize or don't think that the Corp's
23 subsequent review is substantive. And I can see where you
24 can you can spend a lot of time quickly getting through
25 FERC's process in two years, but if you don't talk to the

1 Corps at all during that process or the regulatory folks,
2 time can really be lost if you start talking to us very late
3 and we have additional information needs that we could have
4 flagged earlier to better align with FERC's needs. So I see
5 that being the bigger risk.

6 And that's not a fault of FERC's process. You
7 know, FERC is managing it's own laws and regulations. But I
8 think not having -- while not having to acquire any sort of
9 documentation of how far you are working with the Corps, it
10 might be prudent to help avoid some surprise by at least
11 incorporating some suggestion or recommendation of how far
12 you in your conversations with the regulatory program or the
13 408 program, which I know you do sort of account for more
14 explicitly if you want to use a Corps project.

15 But so again, I think is great to getting -- it
16 sounds like it -- seems like it's great for getting through
17 a FERC process in two years, but it doesn't really, I think,
18 capture the real length of time needed if all the agencies
19 aren't working together from start to finish.

20 MR. HANSEN: I'd like to now open it up to anyone
21 in the audience, including members of the first panel. Does
22 anyone have any question or comments specifically on the
23 criteria from the original solicitation? I know Ms.
24 Swaminathan. And if you do have questions or comments, if
25 you weren't here for the first panel, please step to the

Page 70

1 microphone in the front. State your name, your
2 affiliation. And if you don't mind spelling your last name,
3 so the court reporter can accurately transcribe it. Oh, and
4 make certain that the microphone is on. Thank you.

5 MS. SWAMINATHAN: Is this on? Yeah, my name is
6 Ramya Swaminathan. Last name is S-w-a-m-i-n-a-t-h-a-n. I'm
7 at Rye Development. We're the licensee for the project that
8 did go through the two year pilot process on Kentucky lock
9 and dam 11.

10 My -- I have a comment and a question. . The
11 comment is so we're a developer of this kind of project in a
12 number of jurisdictions, including a number of projects on
13 USACE dams. And at the time, we considered all the projects
14 in our portfolio for participation in this pilot process.

15 My question is to Kyle and to Amy. The
16 feasibility requirement from federal dam owners was
17 problematic at the time. And it was conveyed to us that it
18 would be problematic for USACE to determine feasibility at
19 that time. Do you know if USACE would be willing to
20 consider providing that kind of qualification up front?
21 And if not, I think that's a major group of dams that in
22 many cases are best suited to this kind of development that
23 are essentially excluded from treatment in this pilot
24 process?

25 MS. KLEIN: I will defer to Kyle on that since

1 the regulatory program wouldn't be issuing the feasibility
2 letters. It's really directed towards Kyle's program.

3 Thank you.

4 MR. HANSEN: Yes, Kyle, thank you. Please I need
5 you to answer in the mike up there. Thank you, sir.

6 MR. JONES: I'm Kyle Jones. I'm not sure what
7 kind of answer I can give. I talked with Kamau earlier in the
8 day regarding your question. And so, I probably would be
9 better certainly to provide it for a record or something.
10 I, you know, I am not sure I understood the question as
11 well, you know, well enough to give you a good answer.

12 Certainly as far as dealing with the individual
13 projects, you know, our 408 process, you know, will go on
14 through to make sure that your project suits our project as
15 far as the structural concerns are. But as far as
16 feasibility studies or anything like that, I'm not sure I am
17 really the best person to try to answer that. And so I
18 apologize for not have a better answer. But certainly, if
19 you get in touch with us, we'll see if we can give you a
20 better answer. Okay.

21 MR. HANSEN: Any other comments or questions from
22 the audience on this topic? Okay great. I don't think so.
23 Dustin, do we have any phone comments or questions?

24 MR. HAHN: We have no questions at this time.

25 MR. HANSEN: Thank you, Dustin. So we'll move on

Page 72

1 to our second question. Are there environmental, economic,
2 regulatory, or legal factors that make a two year process
3 not practicable? I'd like to start by directing this to Ms.
4 Koerner.

5 MS. KOERNER: There's usually a number of field
6 studies involved, which can take more than one season. If
7 the applicant has done a lot of pre-work and provided that
8 information and has given the commission and other agencies
9 and other parties involved enough information to show that
10 it qualifies for those criteria, that's fine. But should
11 there be a need for additional seasons of study, that would
12 become very difficult.

13 Some of these projects may require, if they are
14 on or affect national forest lands, may require a special
15 use authorization from the Forest Service under the Federal
16 Land Management Policy Act, but I -- it usually does not
17 interfere with the licensing. It's usually subsequent to
18 the licensing. The Forest Service attempts to tier on to
19 the Commission's NEPA document. And it certainly would not
20 stop the license from being issued. It's a subsequent
21 addition.

22 But if we need additional information for the
23 special use authorization that was not provided during the
24 licensing, I can see that that might have an economic impact
25 on the applicants.

1 MR. HANSEN: Mr. O'Keefe?

2 MR. O'KEEFE: Yeah, so a couple of thoughts on
3 this one. The first is I think there's some best practices
4 here that we need to make sure are applied as well. And so,
5 in addition to, you know, what we haven't, you know, written
6 out in terms of, you know, the formal requirements of a
7 process, you know, I was reviewing some of the recent
8 issuances over the last few years from the Commission,
9 license orders. And I looking at the ones that were
10 implemented in a relatively, you know, short time frame.

11 And you know, the factors that really, you know,
12 stand out or just, you know, sites free from controversy,
13 adequate baseline information, which has been entered --
14 discussed here, and consultation with stakeholders early and
15 often.

16 And I think there's an opportunity I think about
17 how to move forward with this, not only from a regulatory
18 perspective, but also I think there's an opportunity for the
19 Commission to really codify some best practices around this.
20 And I think that would be extremely helpful.

21 The other thing, you know, the comment that was
22 just mentioned about the Corps dams, and this -- the -- you
23 know, when we go back to the requirements and securing that
24 confirmation of conceptually feasible and what does that
25 mean, that seems to be somewhat of a barrier at least for

Page 74

1 the those dams.

2 And I think, you know, as far as our interests,
3 you know, from the perspective of the hydropower repower
4 reform coalition, you know, finding a way to get past that
5 barrier. And you know, we have this MOU now between the
6 Corps and the Commission that, you know, will hopefully, you
7 know, provides some opportunity for processes to operate in
8 parallel.

9 But I think, you know, if there's some different
10 language there. You know, if there's a hang up around, you
11 know, what the definition of conceptually feasible is, and
12 if there's some other criteria that we might use for that, I
13 -- of all the criteria that I'm looking at, that's seems to
14 be one of the issues that is, you know, a hang up on this
15 two year process for at least those Corps facilities. So
16 that's my thoughts there. Thanks.

17 MR. HANSEN: Mr. Little, any roadblocks that you
18 can see?

19 MR. LITTLE: I don't see absolute roadblocks.
20 And I would concur with Mr. O'Keefe that it's -- I would
21 look for just some sort of memorialization of this, whether
22 it's codification or something else, which would be a
23 stakeholder process. And I think that would put more flesh
24 on the bone here.

25 There are -- the question asks whether it's

1 practical or not. And to me, that presents an opportunity
2 to I wouldn't say load this up, but augment this with the
3 stakeholder experience from all corners of the country.
4 Because you know, in hearing about the Kentucky experience,
5 we're starting to get a sense of how the studies were
6 performed. And you know, the U.S. Forest Service has a
7 concern for multiple year studies. Maybe the Corps does as
8 well. Certainly my agency would be concerned during the
9 consultation process about the opportunity in the event the
10 first year of studies failed or required for some reason a
11 second year of studies, what are the opportunities for that.
12 That goes to that sense of practicality.

13 And in terms of a more formal impediment or
14 factor, let's just call it that, the list of the sequence of
15 events in the -- that's attached to the notice from January
16 of 2014 had the -- and this is probably common for most
17 states, but had the water quality certification coming prior
18 to the issuance of an EA. And at least in our state, that
19 presents an obstacle because in a regulatory provision,
20 we're required to have an EA first before we issue our
21 water quality certificate. It's a completeness issue.

22 And so, would there be a way to confront that to
23 encounter that and to work with that?

24 Kentucky has had a very interesting experience
25 with an interim water quality cert, which is -- could be

Page 76

1 someone's answer to our problem. I don't know if we have
2 authority to do or not. But you know, they're -- that's one
3 issue for us that would, while not having a concern with the
4 two year period, would be something that would have to be
5 gotten over.

6 Who has to get over it, I don't know whether it
7 would be the Commission or the state. I'm not sure. Or
8 maybe both, but that's the kind of thing that needs to be
9 put on the table and given a full fleshing out, because
10 there would be regulatory requirements that our state and
11 maybe others have to confront in order to work with the
12 compression that this contemplates.

13 MR. HANSEN: Ms. Klein, any thoughts on this
14 topic?

15 MS. KLEIN: I think a lot of things have been
16 covered. I think from the two year process, if it's just
17 FERC's process, I have no opinion really on whether or not
18 FERC process only is practicable in two years.

19 Now if you're talking both FERC and Corps being
20 done in two years together, again, I think that's definitely
21 very -- still very feasible. Our -- the revised MOU we
22 issued in July this past year tries to outline how we can
23 best align our processes in order to get to a decision
24 around the same time. That MOU's specific to using it at,
25 you know, at Corps projects, but the concepts remain the

1 same if the Corps projects aren't involved, how regulatory
2 and FERC can align.

3 With that said, in order to align, that is
4 obviously a bigger economic investment for developers to be
5 trying to fulfill the requirements of both agencies upfront.
6 So I mean it's -- there's obviously cost if you want to move
7 through the processes in parallel instead of sequentially.
8 There are more upfront costs, a lot more effort, but it
9 definitely can be done. Especially the, you know, the
10 smaller the project, obviously, you know if your EIS level,
11 that's usually what gets us into the two, three, four year
12 mark, but if you're more the environmental assessment level,
13 that's usually a smaller project for our purposes. And we
14 can usually get through our review more quickly.

15 There always is complicating factors, depending
16 on the site. Is it an historic dam or an historic facility
17 being modified? Are there issues with endangered species,
18 all these other laws both agencies are responsible for
19 complying with can add complexity, but that doesn't mean
20 it's not practicable, but it could cost more, so.

21 MR. HANSEN: Mr. Borgquist, from a developer's
22 standpoint, can you think of some factors that would make
23 these two year process not practicable?

24 MR. BORGQUIST: Ryan, I can think of a thousand.
25 Here's the problem. Every license application on a facility

Page 78

1 that we're talking about here is going to be unique. Every
2 set of stakeholders will be unique. The state issues will
3 be unique. I think if FERC is ready to try to fit its work
4 into a two year period, and then allow the developer and the
5 development to take the time it needs to deal with the
6 issues that come down the road, because some of them you
7 don't even see until you're halfway through the process.

8 So here I am, I'm a lawyer. I don't have good
9 ideas about laws and regulations that fix this. And I'm
10 sort of surprised I'm going to say this, but I really think
11 a lot of this is a FERC culture issue. In other words, we
12 can only do so much with these rules and regulations. And
13 sometimes we try to fix something and we end up creating a
14 mess in the process, because we're not flexible enough to
15 deal with the things coming down the road. And I think
16 about everyone of these projects has got its own challenges
17 that need to be navigated uniquely to that project.

18 So and you can't put that in -- you can't codify
19 culture. You can't codify a feeling of problem solving with
20 your regulator to try to navigate all of this.

21 Now I -- they didn't pay me to say this, but I
22 certainly -- Jennifer and Vince are no shrinking violets,
23 right? We had a real and honest relationship about the
24 challenges that Gordon Butte, but I also felt like I was
25 dealing with people that wanted to problem solve and get the

1 job done. And that ended up carrying the day.

2 I still come back to this. Again, you're going
3 to make a report to Congress. There's got to be enough
4 flexibility in this program and this process to make sure
5 that you can account for different things and allow the
6 developer and the development to bring stakeholders along
7 and bring the process along in a way that's going to be
8 successful. And I'm proud of what we did with Gordon Butte,
9 but 90 percent of our work was not with FERC. It was with
10 local and state agencies that we fit into the FERC process.

11 MR. HANSEN: Ms. Wasserman, anything to add?

12 MS. WASSERMAN: Why do lawyers always --

13 MR. HANSEN: Microphone please?

14 MS. WASSERMAN: Why do lawyers always equivocate?
15 I don't about that. That's the joke. The answer is
16 sometimes. In an ideal world, of course, there are no
17 impediments. What we've all been dancing around is in order
18 to make this work fast and efficiently, and still be
19 defensible and supportable, you need to gather a substantial
20 amount of information up front. You tell a prospective
21 investor you might see a license in five years or seven
22 years, they're going to invest in something else. I know
23 from own experience how difficult that is.

24 So generally, that front load in order to make
25 this work quickly, is a real disincentive to private

Page 80

1 investment. Perhaps if there were a midpoint. If I could
2 tell my own board of directors, well, I can't guarantee a
3 license in two years. I can guarantee some sort of midterm
4 assurance, something you can take to your bank as the
5 likelihood of that. And I don't know how to do that.

6 But the point of it is to get it to work quickly,
7 you need to give the people what they need. And that
8 includes stakeholders, agencies, anybody who's involved in
9 this, but to do that means substantial money. And if you
10 can provide some assurance short of five years later, you
11 might get a license, that would -- that is a driver that at
12 least I find in private development is very, very difficult.

13 I think as far as the rest of it goes, honestly,
14 the FERC process loads the initiative on the applicant.
15 It's not the Commission that sits around dilly dallying.
16 You -- we get to file our NOI and our TLP -- whenever we wish.
17 And it goes off from there. And I have found the Commission
18 to be extraordinarily responsive in every aspect. So no
19 complaint there.

20 I think the front end capital is a real issue. I
21 think again, there are suites of dams where these would not
22 be practicable. An illustration would be we work on --
23 right now, we're involved with at least half a dozen state
24 owned dams in various states. And at least in New England,
25 in order to acquire the property rights that FERC would

1 require, if you're going to be able to do that at all, for
2 example Massachusetts doesn't extend more than five year
3 leases, which doesn't help you with your investors. If you
4 have a way to overcome -- some of the state leasing
5 processes are always tied to public benefits and it's a
6 balancing act. Again, if I have the information, I can show
7 the public benefits. And I can get my assurance for your
8 property rights requirements.

9 But my investors are going to have to bear that
10 burden. So yeah, that can be a real problem. It's not as
11 much of a problem when it's a privately owned dam or a --
12 federal dams have their own problems.

13 We do a lot of work with municipalities and with
14 states. States see the process as, oh, got \$10 bucks, want
15 to buy a dam? Because in so many instances, they just don't
16 have the resources to address them appropriately. So that
17 is an issue on the property rights piece of it.

18 I will touch on this later, but I think you could
19 make it more practicable if the Commission would consider
20 the notion of programmatic NEPA review. I'll talk about
21 that later. That would give us a big arsenal to work from.

22 MR. HANSEN: Something to look forward to. Thank
23 you. The audience, does anyone have any questions or
24 comments about this particular question, factors that may
25 not make a two process practicable? All right, I'm not

Page 82

1 seeing any. Dustin, anyone on the phone with questions or
2 comments?

3 MR. HAHN: No questions at this time.

4 MR. HANSEN: All right. Thank you, sir. Oh,
5 absolutely. Chairman LaFleur.

6 CHAIRMAN LAFLEUR: See if I can figure out how to --
7 explain a little bit more what you meant about a FERC
8 culture issue? It caught my ear when you said it. Thank
9 you.

10 MR. BORGQUIST: Sure. It's not -- I didn't raise
11 the issue to say that there was a problem. So let me be
12 clear about that. I think we had the kind of culture and
13 productivity and tenor with the group we were licensing with
14 that was good, but it's important. And it's hard to codify.
15 It comes organically and internally. And again, I'm a
16 lawyer saying these sort of touchy-feely things, but it
17 makes a huge difference when you have a real honest
18 forthright problem solving relationship with your
19 regulator.

20 And people, you know, people ask me all the time,
21 aren't there too many regulations? Isn't their regulatory
22 burden so terrible? And shouldn't we try to get rid of
23 these regulations? And my response to that is I'm really an
24 environmentalist. I'm building the close the loop pump
25 storage facility because I believe in clean energy. Right?

1 I've -- I submitted this project to FERC even though there
2 were arguments to be made that I wasn't in a water way of
3 the United States and didn't have to do that. I wanted to
4 review and to be put through my paces on the project.

5 And it's the regulators that we deal with that
6 can make all the difference in the world. And let's think
7 about that for a second. Regulators -- the easiest thing
8 for a regulator to say is no. That requires no risk.
9 That's certain. It's protective of job security and the
10 agency and what not. It's much more difficult to find a
11 creative problem solving way to say yes.

12 And when you find those kind of regulators who
13 are still trying to do their job, but finding ways to get
14 the problem solved, that is like heaven, right? And anybody
15 that's done project development knows you get some
16 regulators that just -- they just -- their answer to
17 everything is no, right? And you're trying to figure out
18 how to do amorphous things to get the boxes checked and the
19 job done.

20 So this -- Madame Chairman, this is important. I
21 don't know how to codify it. I don't know what else to say
22 about it, but it -- having been on the developer side of
23 this and dealt with many different agencies and regulators,
24 this is a by God real deal.

25 CHAIRMAN LAFLEUR: Well, thank you very much for your

Page 84

1 comments. And I do know from a lot of different leadership
2 experiences, culture is the hardest thing to change in any
3 way. But it sounds like a little bit what you're saying if
4 I could translate it is having a determination, a shared
5 determination to get through a certain -- on a certain time
6 frame if possible was part of this. And it's --

7 MR. BORGQUIST: Listen, I don't want to -- I've
8 got -- I think they might fit into some of the other
9 questions. I've got some -- we did some things in this
10 process, this straightforward not a pilot project with the
11 existing framework that worked. I mean, we did it in start
12 to finish PAD to the issuance of the license, including
13 board of consultants meetings in three and a half years on a
14 billion dollar major hydroproject.

15 I think we could have been a little faster if the
16 EA had been processed a little -- even a little bit faster,
17 but I'm satisfied with what happened. I think, again, my
18 relationship with FERC was real and honest. They were doing
19 their job. I was trying to my job and it worked. And I
20 have a couple of practical technical things that we did that
21 I think were helpful, but really this culture thing was
22 important and carried a lot of the day.

23 CHAIRMAN LAFLEUR: Thank you.

24 MR. HANSEN: Ms. Koerner had something she wanted
25 to add and we'll let her have the final word on this

1 question.

2 MS. KOERNER: I wanted to echo Mr. Borgquist.
3 The larger scale you go, the more likely you are to have
4 multiple jurisdictions, multiple parties who are interested,
5 maybe attract parties who wouldn't have been interested,
6 except it is for a larger scale.

7 But the communication issue is a lot of what I
8 think about when you start going for something like this.
9 We already have communication issues as is, both internally
10 and with other agencies and with the stakeholders and with
11 the applicants.

12 As an example, I get a number of letters from Rye
13 Development on a number of projects probably six to eight
14 weeks after they were mailed, because mail sent through
15 regular post to any federal agency in the D.C. area is first
16 rerouted to be treated for anthrax. And then eventually
17 comes back to the agency and is rerouted. So the idea that
18 we could have timely communication, I really think we need
19 to think about 21st century communication.

20 And there's also the idea of scheduling.
21 Everybody has limited staff, shrinking staff, bringing
22 larger priorities. For the Forest Service, the number one
23 priority has to be public health and safety. So as much as
24 we'd like to make this a priority, if we have limited staff
25 who have to take care of that issue, they won't be taking

Page 86

1 care of this issue.

2 Also going on a larger scale, what about the
3 licensees who are going through the regular application
4 process TLP, ALP, ILP? Are they going to be satisfied if
5 this becomes a priority in their area over what they're
6 going through on their own process? And I really wonder
7 about that. Somebody else would have to address that.

8 Thank you.

9 MR. HANSEN: Thank you. We're going to move to
10 the third question now. Can a two year process be
11 successfully implemented on a large scale for multiple
12 projects on a consistent basis? I'd like to start with
13 the views of Mrs. Klein on this one.

14 MS. KLEIN: You know, I'm not sure if I have much
15 more to add on this. You know, the two year process, again,
16 for FERC to do it, I can't weigh in on how practicable how
17 it is for the, you know, for FERC as an agency to do it.

18 For the Corps, we're organized so differently, we
19 have 1300 regulators in 38 district offices. So you're not
20 having the same set of people reviewing multiple projects.
21 You have probably a different person for each project.

22 So, again, if we -- as -- if we get the
23 information we need, we can, you know, move forward with our
24 review as quickly as that information comes in, recognizing
25 again there's a cost associated with providing that

1 information.

2 So I think it's -- I think, again, yes, it can be
3 successful, but of course, it comes at a -- there's
4 tradeoffs and costs. For the Corps regulatory program, I
5 don't see a barrier to two years that we haven't already
6 discussed in the previous question.

7 MR. HANSEN: From the point of view of a state
8 resource agency, Mr. Little?

9 MR. LITTLE: Thank you. I don't know how we
10 can't go back to the second question to answer this one, so
11 I'll take it back to the second question, because
12 practically, as a practical matter, I think in most cases,
13 one could look at a development, a proposed development and
14 work a way to do that in a two year time frame.

15 But when I was thinking about the questions, I
16 started to ask myself, well, what's the magic of two years.
17 And whether this actually, you know, in the alternative is a
18 question, and this is something that Mr. Borgquist was to me
19 alluding to, is it also a question of how do the developers
20 and agencies and all these interests get scheduled and
21 prioritized? Is it something that fits within two years or
22 in some cases, more or even less? And would that meet with
23 the goal here to have -- maybe we've falling into the pre --
24 the consultation pre-licensing phase here of another type
25 of MOU that would say, you know, the ultimate goal is to

Page 88

1 have this done in concise phases and the early consultation
2 phase takes this much time. Your NEPA process takes
3 that much time during which other things are happening on
4 their own schedule. That may be a two and a half year
5 package of something of that nature, not necessarily two
6 years.

7 The problem with what I'm talking about, of
8 course, is it's an intensive negotiated event or process,
9 but I wasn't sure what the magic of two years was. And I
10 don't mean to use magic as a pejorative, but it makes me
11 think that from what I heard earlier this afternoon and what
12 we're saying here today, this afternoon, it's working out to
13 be more of an interest based problem solving exercise on a
14 case by case basis.

15 I think the two year time frame is well selected,
16 but I don't know if it necessarily has to be adhered to,
17 because of the things that we've been talking about. What's
18 the -- what's more important to an applicant? Is it the
19 certainty that comes with hitting a deadline, a two year
20 deadline perhaps or the certainty that comes from knowing
21 that your studies are going to be done by a date certain,
22 regardless of where that fits within the general two year
23 range, something of that nature might be another way to
24 approach this and still accomplish the same goals. I just
25 -- I don't know if that's the case, but from what I'm

1 hearing this afternoon, it seems like that may be a way to
2 work with this and accomplish what the Commission may be
3 trying to do, which is, you know, expedition focus and as
4 well the fact based and well organized discussion that Mr.
5 Borgquist was talking about, which seems, you know, I've
6 been there. I get that, but that's the work these things.

7 MR. HANSEN: Mr. Borgquist, could your companies
8 handle multiple projects at once going through this process?

9 MR. BORGQUIST: Yes.

10 MR. HANSEN: Would that be something that would
11 -- not to ask you a simple question, but that clearly would
12 be something that would be of interest to you and your
13 company?

14 MR. BORGQUIST: Let me just say, I think the --
15 from the developer's dream, okay, would be that you were
16 ready to do a two year process, but also flexible enough to
17 allow us to let us choose to slip that, well we needed to, in
18 order to be effective on the overall grand scheme of things,
19 right? So we didn't create this artificial two year thing,
20 but some of the comments that were made in the first panel
21 really ring home, right? It's the certainty, it's the
22 scheduling, it's the predictability of what process we're
23 going to go through, even if things slide or they get
24 adjusted for realities that happen on the ground.

25 And I'll give you an example of this. In the

Page 90

1 Gordon Butte timeline, we drug our feet at one point for a
2 few months. We thought we had an agreement with the state
3 to buy water out of a diversion downstream and then divert
4 it at the project site.

5 And that deal fell apart. And we had to go
6 pursue another avenue to get the water rights sorted out,
7 where we knew the water right at least identified and
8 defined how we were going to do that, so that we could make
9 our studies make sense, so that we could fit into the NEPA
10 scoping. And so there's all these multiple things going on at
11 the same time. And my fear, though I worry that my brothers
12 and sisters in the development community are -- would kill
13 me for saying this. My fear is that we're pushing too hard,
14 too fast artificially and not allowing enough flexibility
15 to adjust because sometimes that adjustment is what's
16 necessary to keep the stakeholders sorted and the process
17 moving in the right direction.

18 So I would encourage you whatever you suggest
19 back when you report is to make sure that there's enough
20 flexibility in the process for all of us to make those
21 adjustments.

22 It's the coming to the table early and saying
23 with the developer and the regulator, okay, these are the
24 things we need to do. This is generally how we're going to
25 do them. This is generally how the time was going to go and

1 the process is going to be run. That kind of front end
2 planning and information is helpful to investors. It's
3 helpful to keep everybody working on the same goals and that
4 needs to be a part of how this gets resolved. But could we
5 do these -- can we have these going on at the same time?
6 Absolutely.

7 MR. HANSEN: Ms. Wasserman, same for you.

8 MS. WASSERMAN: Yes, same answer. However,
9 there's a but. And the but is we're going to need a little
10 -- I would recommend this in your report, a little bit more
11 assistance from the Commission as EERE did when they were
12 trying to support the development of offshore wind with
13 BOEM. They staked out areas of the country, figured out the
14 criteria, and they did programmatic NEPA EISs and EAs. That
15 took a tremendous burden off of developers. We knew where
16 and what and what would be expected. It took a tremendous
17 burden off of the state natural resource agencies because
18 they knew that what dropped out of those EISs and EAs were
19 the things they were going to have to focus on.

20 I don't know if you'd structure that
21 geographically. Commonality of technology, commonality of
22 inputs. There are any number of ways that could be sorted,
23 but that upfront sort in fact would certainly standardize
24 the environmental review process, would help state agencies
25 with the resources they need, so they don't have to revisit

Page 92

1 this stuff if they choose not to, and would certainly give
2 developers a much clearer goal of where and how and if you
3 want to do something in two years, these might be the best
4 fits.

5 The second piece, and I think that Bill had
6 mentioned it as well as Tom O'Keefe, was best practices.
7 Again, if the Commission were to develop a checklist of best
8 practices as they have done in say the in conduit hydropower
9 conditional proceedings, you could use that list if a
10 proponent is willing to commit up front to the use of those
11 best practices, you might be able to issue the kind of
12 interim assurance our investors need short of a five here
13 license process.

14 I know I'm throwing a good deal of this back on
15 the Commission, but it has worked in like situations where
16 you have competing jurisdictions, inadequate state
17 resources, overworked permitting staff, it just makes it
18 simpler for everybody. And it lets everybody know up front
19 what is going to be out of the realm of consideration and
20 what is going to be worth investing in?

21 MR. HANSEN: Mr. O'Keefe, you represent, you
22 know, a large stakeholder group. How would large or huge
23 numbers of two year processes -- project all at once affect
24 your group and your ability to participate?

25 MR. O'KEEFE: Well, it would be some work, but if

1 we're picking the right sites for this, my personal
2 perspective is this could be, you know, doable if we're
3 picking the right sites for these projects.

4 You know, just a couple of thoughts here. I
5 mean, the one thing I'd, you know, when you say large scale
6 or multiple projects, one caution I have is if we're talking
7 about multiple projects in a basin, you know, do we have the
8 ability within a two year time frame to really think about
9 that in a way that's integrated, in a way that's
10 comprehensive for a single basin.

11 However, I know, you know, the multi project
12 environmental assessment you did for the Allegheny River
13 project, I mean, those projects, I think that's a good
14 example of being able to have, you know, a single NEPA
15 document that is integrated across, you know, potentially a
16 range of projects. So that's a way that like you can
17 potentially do multiple projects, but still have, you know,
18 one environmental process that we're engaged in.

19 And then, as far as like, you know, rolling this
20 out to, you know, multiple projects, I mean, I think there's
21 still this sort of nagging question of, okay, we only had,
22 you know, one project take advantage of this. So it's still
23 like a little bit premature to tell some of this stuff.

24 And I think one of the things we're going to be
25 really interested in and, you know, I've heard some of this

Page 94

1 today, and it's been very informative, the discussion, but
2 just a better understanding of why there was only that one
3 project and what the true barriers have been at least in
4 this initial phase. And I know that will help us, you know,
5 inform our comments. And I would just, you know, invite
6 anyone who's engaged in this, you know, to reach out to us
7 before we file our written comments and it'd just be really
8 helpful to understand this better. So that's one thing.

9 And the final thing, I just wanted to make a
10 point here on the culture, the FERC culture issue that was
11 brought up. And I remember I actually got the quote here
12 from Ann Miles when she was testifying as Director of
13 the Office of Energy Projects before the House Energy and Commerce
14 Committee a couple of years ago here last year. This was
15 two years ago. And she said, "It is important to note that
16 in many instances, it is applicants, federal, and state
17 agencies and other stakeholders that determine project
18 success and control whether the regulatory process will be
19 short or long, simple, or complex. For example, where a
20 developer picks the site that raises few environmental
21 issues or works early to build rapport with stakeholders and
22 where agencies and other stakeholders commit to fully and
23 timely engage in the regulatory process, project review can
24 move very quickly. In these instances, licenses can be
25 issued in two years or less."

1 And so, in my own, you know, sort of cursory
2 review over the last several years, you know, I was able to
3 confirm this statement. And I would say, you know, the
4 Commission is in a unique position as, you know, the mentor
5 for developers that are coming and looking to, you know,
6 take advantage of opportunities that they see out on the
7 landscape, you know, to provide, you know, the advice and
8 mentorship that, you know, as reflected in this philosophy
9 here.

10 And I would say that in my own experience, just
11 over the last, you know, five years or so, I have seen --
12 I'm very pleased with what I've seen in terms of, you know,
13 just sort of the culture and philosophy of the Commission
14 and doing a good job in this area.

15 I think there's opportunities to improve, but I
16 like the direction that things are headed in. And I hope
17 that will continue, because I think it's been a good thing.
18 And just in terms of looking at the engagement of Commission
19 staff early in the process, some of the information that you
20 put on the website that's really helpful in providing
21 guidance, I hope that will continue. And I see it as, you
22 know, positive work in that direction. So thanks.

23 MR. HANSEN: Thank you. I'd like to turn to the
24 audience, including the first panel. Does anyone have any
25 comments or questions on the -- on this topic? Excellent.

Page 96

1 I don't see any. Thank you. Dustin, do we have any
2 questions or comments from our phone participants?

3 MR. HAHN: No questions at this time.

4 MR. HANSEN: Thank you very much, Dustin. All
5 right. We move to our fourth question of the afternoon.
6 Are there any elements of the existing licensing processes
7 that could be applied in new ways to consistently expedite a
8 processing of applications? I want to go first to Ms.
9 Wasserman on this question.

10 MS. WASSERMAN: I think there are. I don't know
11 if strictly speaking this is within the existing license
12 process, but you all demonstrated it on the first panel the
13 notion of taking so much of that front end risk involved in
14 acquiring water quality, certifications, acquiring
15 historical preservation concurrences, etcetera. If the
16 Commission would be willing to take that same approach and
17 say, yeah, we're going to take these very time consuming and
18 very expensive studies, assuming there's sufficient
19 information and there is a rule about what's sufficient
20 information, and we're going to make those post licensing
21 preconstruction conditions. That would certainly help with
22 private investment. You get your license much more quickly.
23 And you have a very good idea of what you're going to have
24 to do before you actually invest the money in construction.
25 That, I think is something that could be applied. I've not

1 heard it applied outside of this pilot process, but
2 analytically, if it can work there, I don't know why we
3 couldn't modify existing processes to just shift the pre and
4 post licensing requirements.

5 Secondly, I think that perhaps the burden is on
6 us as developers, but I find that too few people, maybe this
7 goes back to the topic of culture, FERC culture, actually
8 exploit the opportunities they have. They don't call the
9 Commission when they have a question. They don't go to the
10 state agency. It's this stay below the radar and you'll get
11 it done. The Commission's tried to be out there, but at the
12 risk of sounding, you know, stupid, you have to keep
13 pounding that into people's heads really come to us. We're
14 not here to enforce against you. You have this problem with
15 that problem. Come to us. Maybe we can alleviate it up
16 front. I don't think that lots of people really understand
17 that mentality. And, again, I think that potentially goes
18 into the question about culture.

19 The other point I would make here would be that
20 the Commission within the licensing has tremendous
21 discretion. It is amazing what I have learned in asking
22 questions. But the discretion for things like waivers,
23 separate and distinct from the waiving of a draft license
24 application or a final EA review, but waivers on other
25 topics. The discretion is enormous. I secured one in order

Page 98

1 to be able to qualify for repairing an existing structure at
2 the request of a constituent group that ordinarily would
3 have thrown me right into the ILP process. I brought it up.
4 We discussed it. All of a sudden, this is not going to be
5 an impediment. They did not interpret it as sufficiently
6 diversionary or in this case the inundation that would
7 result, wasn't going to be long term enough to make a
8 difference. That's not in your regulations. I called
9 somebody on the permitting staff and I asked. And I think
10 the Commission could use that discretion a little bit more
11 creatively if they wish to. And still we're within the
12 rules.

13 MR. HANSEN: Ms. Koerner, you have a lot of
14 experience with FERC licensing. What are your thoughts on
15 this topic?

16 MS. KOERNER: In the comments following the first
17 workshop, the Forest Service suggested that rather than come
18 up with a fourth licensing process, which might involve
19 amending the Federal Power Act and a rule making in yet
20 another process for everyone to learn, Forest Service
21 suggested that the ILP be amended to be able to support this
22 two year process. And we listed a number of ways that the
23 ILP could be amended. And I think we still stand behind
24 that.

25 Certainly, there's a push back today to adding

1 more regulations. I don't know what you would take away if
2 we're having the one for one regulation removal, what would
3 the Commission take away? I have no idea, but I think
4 that's something that we really need to consider.

5 And everyone here who's had to go through
6 learning three different licensing processes, I think the
7 ILP is well enough constructed that it could be fixed to
8 support this. And I think this should be supported.

9 MR. HANSEN: Mr. O'Keefe, would you like to chime
10 in on this?

11 MR. O'KEEFE: Yeah.

12 MR. HANSEN: Microphone, sir? Thank you.

13 MR. O'KEEFE: Okay, so yeah, just a few thoughts
14 on this one and just kind of following up on the point of
15 opportunities within the integrated licensing process. We
16 had a couple of specific ideas. And, you know, one, I think
17 there's some opportunity to shorten the time, too, should
18 the notice on the notice of intent and preapplication
19 document for noncontroversial projects where scoping and
20 defining the geographic scope of the project can happen
21 faster. I think there's -- we see opportunities for
22 standard studies that could be applied and implemented.

23 There's opportunities to -- maybe we could skip
24 the draft license application step. And, you know, give
25 them the scope of some these projects, I think there's some

Page 100

1 opportunity to expedite the preparation of the environmental
2 assessment.

3 I think in looking at these, one of the questions
4 we have and it'd be very helpful for us as you're, you know,
5 kind of thinking about this and reporting back to Congress
6 is what do we need to make these things happen? And my
7 assumption would be some of these things, you know, you have
8 some existing discretion. Maybe some of these things it
9 just requires -- it's a staffing and capacity issue. And
10 being able to, you know, distinguish and understand, you
11 know, the differences on, you know, looking at some of these
12 things and what the limiting factor is would be helpful.

13 And then an important point that I really want to
14 make here in terms of expediting, you know, having things
15 happen faster and more efficiently is a good thing, but I
16 want to make sure from our perspective that that's not done
17 at the expense of opportunities for improvement in -- of the
18 resource and specifically to environmental considerations.

19 So let me just give you a couple examples of
20 that. You know, if you're doing a substantial modification
21 of a dam and looking at some of the recent license orders,
22 you know, these retrofit projects, hydropower on existing
23 dams result in fairly substantial changes to the structure
24 of the outlet works and all that sort of thing, and offers a
25 lot of opportunity to improve things like that temperature

1 condition below the facility, total dissolved gas issues,
2 fish passage issues, like we saw in the Holtwood project.

3 And so, when you have those opportunities, from
4 our perspective, we want to make sure that the project's not
5 happening so fast just with the goal of expediting things,
6 that opportunities to improve the resource are lost in that.
7 So that's something I would say is really important, because
8 in expediting the process, we want to make sure that is not
9 done at the expense of, you know, under the Federal Power
10 Act, you know, having a development that's best adapted to
11 the comprehensive plan for the waterway. So just a couple
12 thoughts on that. Thanks.

13 MR. HANSEN: Mr. Little, do you have anything
14 you'd like to share on this one?

15 MR. LITTLE: Yes, I'd like to second what Ms.
16 Koerner was saying with respect to the ILP. It was coming
17 to that from a slightly different direction than our
18 experience, which has been that there have been a lot of
19 occasions where applicants decided they didn't want to use
20 the ILP. So which was a disappointment to us, because we
21 were ready for use of the ILP, particularly the front
22 loading features.

23 And I understand why the applicants thought that
24 they would rather not use the ILP, but I'm wondering if a
25 two year process or a compressed process of some sort is

Page 102

1 more of the carrot that's needed and whether re-codifying
2 the ILP to place this nicely within the ILP might be one of
3 the things to explore.

4 The other thing I would offer is that to augment
5 the existing process is the use of, you know, somewhat
6 formatted or generic processes. And there was mention of
7 like a generic EA that would get us partway down the path,
8 the NEPA path. I'll plug New York state's environmental
9 assessment form process for the state environmental review.
10 It's a long and now automated process of that the project
11 manager can sit in front of the computer and complete in an
12 afternoon, I would say, if the homework has been done. And
13 that gets our state environmental review process off the
14 ground to a determination for whether there are adverse --
15 significant adverse impacts. So then you know which pathway
16 you're taking for the state review. And I think that --
17 there is that element available to you already and could be
18 perhaps enhanced.

19 MR. HANSEN: Thank you. I like to turn to Ms.
20 Klein on this question?

21 MS. KLEIN: I have a little bit of a different
22 take on this question as well. You know, FERC hydropower
23 team and the Corps hydropower and Corps regulatory spent a
24 long time working on the revised MOU. Again, that came out
25 in July. And it wasn't a matter of trying to apply existing

1 processes in new ways as much it is -- it was an effort in
2 trying to understand the existing process when you have two
3 agencies with different requirements, different cultures, I
4 think people might take it for granted that we just know how
5 FERC processes their applications and the steps they take
6 and vice versa. And there was just a lot of learning that
7 occurred. When we really sat down and tried to understand
8 the steps of each other's process in order to identify when we
9 can most effectively engage with each other and then how to
10 engage.

11 We lost, you know, we lost time communicating
12 just for simple things, where you know, those letters
13 requesting participation go through these weird security
14 clearances and end up in a mushed unreadable format by the
15 time the physical hard copy gets to the right person.

16 So things we wouldn't have known that were
17 sources of delay, that I think we fleshed out in the revised
18 process and are hopefully trying to mitigate. So I'm
19 looking forward to seeing if we can just be more efficient
20 between our two agencies, now that we better understand how
21 to engage each other.

22 And I think we're all looking for feedback for
23 those entities, for the developers who try to follow that
24 process regarding what really works and what doesn't,
25 because again, that was our best attempt. We solicited a

Page 104

1 lot of feedback from others, but we do expect to learn
2 lessons.

3 But I think that's something that could be done
4 now to just make processes more efficient when you have two
5 agencies that both need to accomplish NEPA, as well as a
6 number of other things. And they just want to share and
7 rely on each other's information as much as possible to
8 reduce duplication.

9 And we think this will help us get there. And
10 now it's just the proof's sort of in the pudding. And now
11 we're just waiting for the feedback. Did we really achieve
12 what we set out to, without changing any rules or
13 regulations, but just trying to clarify for both ourselves
14 and the developers of who's doing what and when in order to
15 move through the process. So thank you.

16 MR. HANSEN: Mr. Borgquist, excuse me, Borgquist,
17 you recently went through the licensing process. What is
18 your take on this question?

19 MR. BORGQUIST: So we did, obviously, and again,
20 we did a TLP. We came in early and tried to figure out how
21 to expedite under the existing just this question really.
22 And there were two big sort of targets of low hanging fruit
23 for us to try to avoid and figure out how to avoid them.

24 One, we wanted the NEPA scoping to be early
25 enough that we only had one study season to run, and not run

1 the risk of having to study for a year, submit our Exhibit
2 E, then have the NEPA scope and have to come back for
3 another year of studies because of whatever came up in that
4 public process.

5 So what we did was we went after all the
6 stakeholders engaged. We went and scoped our studies and
7 got the blessing of all the stakeholders, state agencies,
8 and federal agency, U.S. Fish and Wildlife, to bless
9 that scoping. That then allowed FERC to do early NEPA
10 scoping with some confidence that we were not, you know,
11 outside the boundaries.

12 We did that. We were able to finish the study
13 scoping studies, the NEPA scoping, all of it in a year. And
14 of course, that's -- was just a huge time saver. And it was
15 a risk management, because we knew what we were doing and
16 what we had to study and how to get through that.

17 The second thing we did after the studies were
18 finished and reports came out, we went to the agencies and
19 negotiated all of the mitigation measures and drafted an EA
20 that we turned in on our final license application as an
21 exhibit E. And we used existing regulation. And the
22 letters and blessing that we got from all the agencies filed
23 into the docket to avoid a draft license process. And
24 that's a -- first, it's a mystery what will come out of a
25 draft process. We avoided. We also saved some time.

Page 106

1 So, again, those are two things. No new
2 legislation to do that. It's just an intelligent
3 pre-planning, pre-negotiated, pre-directed process that we
4 set forth with staff before we started. Again, on this idea
5 that this is what we're going to do that works for you.
6 This works for us. This is how we're going to get to the
7 end game on this thing and try to be as efficient as
8 possible.

9 MR. HANSEN: Is there anyone in the audience or
10 from the first panel that would like to either have any
11 comments or questions on this topic? Please remember to
12 state your name and affiliation? I think you spelled your
13 name already last time, but today, you need to re-do it.
14 Thank you.

15 MR. BROWN KINLOCH: Yes, I'm David Brown Kinloch
16 with Appalachian Hydro and Shaker Landing Hydro. And I had
17 some comments I wanted to give, but before I get to it, I
18 just have to say that I listened in horror to Ms. Koerner
19 and Mr. Little talk about folding this into the integrated
20 licensing process. That is the death of this. That is the
21 death of this. We could never use the ILP in Kentucky,
22 because I have a very difficult time. These folks here are
23 so overworked, getting them to come to one meeting for the
24 whole thing, a public meeting, let alone trying to get them
25 to come to individual meetings on each of the different

1 topics, it would never happen. It would never.

2 The process would become so long. So if you want
3 to integrate this into anything, it needs to go into the
4 traditional licensing process, because the ILP would never
5 work in Kentucky. It just would not work the way that the
6 regulators are there.

7 Maybe you can integrate -- put it in the
8 integrated license process, too, but it -- the integrated
9 licensing process would take so long to do anyway, that I
10 don't see how this could shorten it up at all.

11 And now to the comments that I wanted to make is
12 that how this could work in an existing licensing process,
13 let's think of it in terms. We're talking about a two year
14 process. We're talking about a year before filing and a
15 year afterwards, okay?

16 Now as I mentioned in the first session today,
17 we've just been through this process for two projects just
18 upstream, not at 11, at 12 and 14. And that took seven
19 years, okay. And there was three and a half years before,
20 okay. And I'll take responsibility for that. And it could
21 be shortened up and will be shortened up in the future.

22 But three and a half years on project that is un
23 -- not controversial, that the agencies have all agreed to a
24 memorandum of agreement on for the Commission to take three
25 and a half years to process it? And I'll take some

Page 108

1 responsibility on that. There were some problems with the
2 license. We fixed those real quickly. But still, talk
3 about three years for the Commission to work on that
4 processing?

5 So the value, the value that we can learn from
6 the two process that could be put into an existing process
7 is giving a time line, a time line that the Commission has
8 to act in. If you've got a project, a license application
9 that everybody's on board with, it's not controversial, why
10 can't we have a time line that say within a year, you will
11 process that application? Not three years. It makes so
12 much sense.

13 So the real value of this is having a time line
14 pre and post to get the work done in. And pre, that gives
15 us the implement -- the reason to go to the agencies and
16 say, look, we're trying to get this done inside this window.

17 And then post filing, that gives the Commission a
18 timeline that says, you know, here's a project everybody's
19 on board with. Let's get the license issued, so.

20 MR. HANSEN: Thank you. Any other comments or
21 questions from the audience? Okay, I don't think there are
22 any further on this one.

23 Dustin, do we have any comments or questions from
24 our phone participants?

25 MR. HAHN: No, there's no questions at this time.

1 MR. HANSEN: All right, thank you. I'm going to
2 let Tim make a quick remark here.

3 MR. FURDYNA: I don't mean to unnecessarily delay
4 what's proving to be a very beneficial and thought-provoking
5 discussion, however, on behalf of the Commission staff that
6 have worked on the two year licensing process in both
7 panels, I just wanted to thank Chairman LaFleur for taking
8 time out of her schedule, both to attend the workshop and
9 share her thoughts on the licensing process with us all.

10 CHAIRMAN LAFLEUR: Okay, thank you, Ryan and Rachel
11 and Tim. And I wanted -- I want to first of all, thank all
12 the staff that put together the tech conference and also
13 thank everyone in OEP and OGC projects and OEA that worked
14 on the two year pilot. I was -- and I want to thank
15 everyone who participated in the tech conference for the
16 candor and clarity of your comments, both the people at the
17 -- sitting in the Commissioner seats. Enjoy because we
18 can't sit in them right now and the people on -- at the
19 microphone.

20 I wasn't going to mention this, but I just had
21 something going through my mind is when I joined an electric
22 company more than 30 years ago, several decades ago as a
23 brand new lawyer, I mean, I wasn't a brand new lawyer, but I
24 was brand new to energy and knew nothing about anything.
25 And was assigned to some small piece of something on a hydro

Page 110

1 project on the Connecticut River. And I said to the whoever
2 I was working for like, well, are there people who don't
3 like hydro? Isn't hydro good? Why is this hard?

4 And of course, I knew nothing and they had to sit
5 down and explain to me how everything worked. And I'm sure
6 that since I'm now in charge of working under the Federal
7 Power Act, you'll be happy to know that I've learned a lot
8 more about all of the laws that govern the nation's national
9 -- natural resources and the Endangered Species Act, and how
10 things work, and the different jurisdictions, and the
11 different competing uses of water that are all part of
12 licensing hydro.

13 But I try to kind of -- I was just thinking as I
14 was sitting here and listening to all this to remember a
15 little bit of that, you know, 20 something year old, who
16 just thought like why is this hard?

17 And so, I appreciate the -- all the comments
18 people have made about how we can do our work better,
19 because that's something we all have to try to do. And the
20 record is still open, so continue to send in your comments.
21 And thank you very much, Ryan and everyone.

22 MR. HANSEN: Well, thank you very much, Chairman.
23 It's wonderful that you were here. And we appreciate all
24 your support. Thank you.

25 We have one final question for today's panel.

1 What, this part seems silly after the last four questions,
2 if any, actions could the Commission take to further
3 facilitate the timely development of hydropower at existing
4 dams and closed loop pump storage projects?

5 We're going to want to hear from everyone on this
6 one, so I'd like to start with Ms. Wasserman and we'll just
7 continue around the table in a clockwise fashion, so that we
8 can hear from everybody.

9 MS. WASSERMAN: I have two comments. The first
10 is that when the Commission, thanks to the Hydropower Regulatory
11 Efficiency Act expanded the 10 -- less than 10 megawatt
12 exemption, that was tremendously helpful, but the
13 requirements that you bring to bear typically on a single
14 megawatt project or a less than single megawatt project and
15 that you bring to bear on a 10 megawatt project can be very,
16 very different. Yet if you're on the small end, you still
17 got to satisfy what the Hoover Dam is satisfying. That's a
18 tremendous disincentive for small projects and small
19 development. And as somebody with a company whose working
20 in the innovative tech side, it can be a tremendous
21 disincentive.

22 Without the Federal Power Act being amended, and
23 I know that's a ridiculous concept these days, I think
24 within the purview of your own regulations, that could be
25 further refined to further simplify something that is less

Page 112

1 than 10 megawatts. All projects are not created equal.

2 I understand small project's going to have
3 impacts. And it's a selective process. There still should
4 be a process to exit the 10 megawatt and greater project
5 performance standards, because they're just not workable,
6 particularly if you're looking at existing, nonpowered dams
7 where you might -- there's a reason they're existing and
8 nonpowered generally speaking. And it might be that you're
9 running into an engineering problem or a geographic
10 problem, whatever. But for that group of existing nonpower
11 dams, if you are coming in under 10 megawatts, there should
12 be a simpler process.

13 Separate comment, and you don't have to change
14 your regulations at all, would be to take a leaf out of the
15 NEPA regulations. And we have our cooperating federal
16 agencies and FERC is always the lead agency for that
17 purpose. I think that the whole review process, both pre
18 and post licensing, should be subject to an enforceable
19 schedule, which under NEPA, you have the absolute
20 authority to impose if you are requested to do so by a
21 developer. That, I think, would help quite a bit. It would
22 certainly provide a certain amount of reassurance on the
23 private and as to the duration and the scope.

24 MR. HANSEN: Yes, Mr. Borgquist?

25 MR. BORGQUIST: By the way, it's an honor to be

1 here. Thank you for asking me and listening to these
2 comments. Again, on the non-codified, nonlegal side, it's a
3 strong project manager, a strong point person at FERC
4 working with the developer. That doesn't require a change
5 in anything. It's just something that you can do right now.
6 It's a dedicated process of communication between the
7 developer and that project manager. It's trying to front
8 load decisions and be efficient and design a process for
9 that project with whatever particulars go into it, to try to
10 meet either this new thing that you're going to come up with
11 or whatever you've got now that's existing. From my
12 perspective, I'm happy with what happened without having a
13 new set of laws in there. And I think we were -- for a
14 billion dollar project, we moved almost as fast as we
15 possibly could. So that's a culture thing. That was the
16 relationship I had with the group working with this project.
17 And I just leave you with that to think about also in the
18 context of codes and regulations and everything else going
19 on.

20 MR. HANSEN: Thank you. Ms. Koerner?

21 MS. KOERNER: I thought a lot about this
22 question. I certainly remember at least as far back as the
23 Clinton administration making lists of projects, federal
24 projects, that generation could be added onto. So I'm not
25 quite sure what is appropriate for the Commission. And I

Page 114

1 think it has to make that decision. Is it going to go out
2 and identify sites and identify areas? Is it going to go
3 out and do pre-scoping, so that that is kind of taking care
4 of with regard to knowing if there's going to be any
5 environmental cultural tribal, other issues to deal with.

6 DOE is doing a number of things. It has
7 its rapid tool kit to help applicants try and identify
8 agencies and to whom they would have to apply and which
9 issues. There's now a national hydropower asset assessment
10 program out of DOE also that is trying to identify where is
11 a good place for new hydropower.

12 I think mostly, what is reasonable for the
13 Commission to do, though, is to assist applicants in looking
14 at that particular basin. Who are the parties? What are
15 the agencies? To whom do they have to get in touch?
16 Anything the Commission can do about training applicants?
17 Because I see a lot of that.

18 You know, we've had applicants for -- to build
19 new hydro projects in wilderness areas, things like that.
20 So I think anything you can do for education of the
21 community or for assisting them in getting in touch with
22 whomever they need to in the basin would be helpful. Thank
23 you.

24 MR. HANSEN: Thank you. Ms. Klein?

25 MS. KLEIN: You know, just again, continuing with

1 what I've already shared, I think for our two agencies, for
2 Corps regulatory and FERC, the most important thing for us
3 really is ensuring we're communicating with each other and
4 that the developer is communicating with the Corps both
5 through the FERC process and independent of the FERC
6 process, but parallel with it.

7 So often, that communication doesn't happen or is
8 not as strong as it could be. And so, you know, we're
9 working on ensuring our staff have the training that they
10 need to know when to engage in the FERC process, When do,
11 you know, how to engage as a cooperating agency? It's a lot
12 of work upfront, often before we even have an action before
13 us. So sometimes I think there's resistance to engage.

14 We're trying to break that, you know, break that
15 barrier and ensure no, no, no, the engaging earlier even
16 when there's nothing before us still pays dividends later.
17 So while we're working that, I think it continues to be
18 important for FERC to continue to reach out to us directly.
19 When our engagement is requested, it can sometimes that --
20 those requests for engagement can get lost when they're
21 buried in a public notice or buried in some more, you know,
22 generic documentation.

23 So reaching out to us directly. I think one of
24 the things that's also helpful, I don't know how often it
25 happens, but I know that, you know, agencies, cooperating

Page 116

1 agencies, can request and others can request various
2 studies. I don't envision a time when a study the Corps
3 needs for its process should be rejected by FERC as a study
4 FERC needs. Now I understand FERC's authorities are
5 different, so there might be circumstances when that occurs,
6 but I think that can create confusion for the public or the
7 developer into thinking that that study is not required for
8 the Corps if FERC rejects it, which is obviously untrue.

9 FERC might not need it, but the Corps still does.
10 And so, I think we can better align our process if we really
11 have an agreement that if the Corps needs a study, FERC will
12 ensure that study is completed, barring, you know, some sort
13 of exceptional circumstance. That would be clearly
14 communicated with both the developer and the Corps.

15 And, you know, that's again, that's all I really
16 have for now. We continue. You know, the Corps continues
17 to invest in training of its staff, training to be problem
18 solvers, not you know, not an agent of no. Training our
19 staff in the various requirements for hydropower, as well as
20 all other types of developments. So it's -- it can be a big
21 order, given that we are evaluating everything from, you
22 know, small docks to buoys to giant hydropower facilities.

23 So I think FERC knowing and appreciating that the
24 regulators you're working with don't have this niche
25 hydropower expertise necessarily, our questions might appear

1 basic for your purposes, but for our purposes, we're really
2 getting at our authority regarding just the discharge of
3 dredge and fill material or work and waters. And everything
4 we come at -- come to the table with is from that
5 perspective.

6 And I think, again, I think we're making big
7 progress. We've been working closely together. And so, I
8 think that commitment to continue to work together will be
9 key going forward. So thank you very much for the
10 opportunity to be here today. I really appreciate it.

11 MR. HANSEN: Thank you. Mr. Little, please?

12 MR. LITTLE: Thanks. First of all, at sort of a
13 granular level, I'm wondering whether the draft license
14 application and perhaps some other aspects of the
15 application process could be made optional, depending on
16 what the proposed project is like and perhaps how, you know,
17 how large it is in terms of the area within the project
18 boundary or if it's coupled with other aspects, such as
19 megawatts or the water quality values and things of that
20 nature.

21 But also, I was encouraged to hear Ms. Koerner's
22 talking about the efforts that have been made to evaluate
23 assets already. And I know that in the Northeast, that's
24 been done over and over again. And I think that if those
25 efforts are ongoing, you know, there are always additional

Page 118

1 variables, the economy in a larger sense and market forces
2 with respect to renewable energies as well. All factor into
3 this plus state policies for renewable portfolios. I'm
4 wondering if, not that I want to thrust burdens on the
5 Commission, but I would suggest that there be a continued
6 undertaking of the combination of all these factors in the
7 assessment of the need for these assets and the promotion or
8 fostering of these smaller hydro assets.

9 Lastly, I just wanted to reiterate something that
10 Mr. Borgquist had said, and others have said it as well,
11 that really, staff has always done a good job in ensuring a
12 dialogue. And the best opportunities that I've experienced
13 were where there was -- and the burden is shared by all
14 participants, where there's been a fully informed and
15 interest based discussion, where that hasn't been as
16 successful, the process has not been as productive.

17 So if the compressed two year process is to
18 really succeed, I think that there has to be an eyes wide
19 open assurance of that among the participants from the
20 outset.

21 And lastly, I also want to thank the Commission
22 for this opportunity. I think we're all going to benefit
23 from it, because it looks like it's going to lead to more.

24 MR. HANSEN: Thank you. Mr. O'Keefe?

25 MR. O'KEEFE: Yeah, so I guess I have four

1 thoughts on this question. So the first one, which has
2 already been alluded to, is studies. And I've been involved
3 in too many proceedings where the Commission has said
4 study's not necessary. That's been requested by a resource
5 agency. And maybe have a licensee with, you know, less or a
6 developer with less experience. And they sort of regard
7 that as like, okay, well, it's not a required study, but it
8 is required by the other resource agency.

9 And then by the time the developer licensee
10 figures that out, there's a bunch of time that's involved,
11 additional time that's involved, that wouldn't have been
12 necessary.

13 So I would say in a minimum, like it would be
14 great if FERC issues a study plan determination that it can
15 make clear that some of these studies may be still necessary
16 for resource agencies. What would be better is if there
17 could be more deference provided to resource agencies,
18 particularly those with mandatory conditioning authority.
19 So that's one thing.

20 The second thing is on the MOUs. I think, you
21 know, what we've been able to -- what the Commission's been
22 able to put together with the Corps, I think that's a
23 positive development. And hopefully, that will lead to
24 proceedings that can happen in parallel instead of
25 sequentially. You know, it's relatively fresh, so you know,

Page 120

1 time will tell I suppose, but I think there's, you know,
2 things are proceeding in the right direction there.

3 And then, you know, there's also been some of
4 these MOUs with a couple of the states as well. And I think
5 there's more opportunity there.

6 You know, the third thing, and this one's, you
7 know, I guess not really under the direct purview of the
8 Commission, but would require some involvement on the part
9 of Congress, but you know, I think sort of cracking this nut
10 with respect to potential duplicative authority with FERC
11 and the Corps and what opportunities there might be to, you
12 know, talk to some folks on the Hill about the potential
13 for, you know, the Corps having exclusive authority to
14 regulate nonfederal hydropower development at their
15 facilities.

16 And then the fourth thing I was just thinking
17 about here is, you know, with respect to, and this doesn't
18 just apply to, you know, these projects that we're talking
19 about today, but you know, some more stringent criteria for
20 preliminary permits. I mean, earlier, you asked the
21 question about capacity with respect to the two year process
22 and capacity for multiple projects. And capacity would
23 certainly be enhanced if we weren't spending time on
24 projects that are just from the start clearly inconsistent
25 with comprehensive plans that have been filed with the

1 Commission.

2 I've been involved in too many of these, where
3 you know, we go through this process. We sometimes spend
4 years on a project that ultimately, you know, falls apart,
5 that if the Commission had applied some more stringent
6 conditions at the -- or criteria at the preliminary permit
7 phase, you know, we wouldn't have had to waste everyone's
8 time on that, both from the developer's perspective, the
9 NGO community's perspective, and the resource agencies and
10 tribes. Those are my thoughts. Thanks.

11 MR. HANSEN: Thank you very much. Do we have any
12 comments or questions from the audience on this final
13 question? Sir? And I know you did so for the first panel,
14 but if you don't mind restating your name and affiliation,
15 sir.

16 MR. JANKEL: Sure.

17 MR. HANSEN: Thank you.

18 MR. JANKEL: Paul Jankel from Europe, Aquinovis,
19 a new technology provider. Just of interest. Can you put
20 your hand up if you're a developer? Not if you're on the
21 panel. That doesn't count. So there's four, five. And if
22 you're an NGO? That was why I wanted to ask that.

23 MR. FURDYNA: Mr. Brown Kinloch?

24 MR. BROWN KINLOCH: Thank you. It's David Brown
25 Kinloch with Appalachian Hydro and Shaker Landing Hydro.

Page 122

1 And I would also like to reflect the -- like the panel and
2 gratitude for the Commission having this hearing. This is
3 incredibly important what you're looking at here.

4 And the reason I say that is, and I've been in
5 this business way too long, but years ago, when there was a
6 problem that came up with issues not being able to dealt
7 with with the traditional licensing process, there really
8 wasn't a way to resolve a lot of things. You all put
9 together the integrated licensing process, which was a major
10 development. And as I see that, that is a way that problems
11 were solved for complex large projects that had a lot of
12 issues.

13 But now I think it's time that we turn our
14 attention to the other extreme, to the small projects, the
15 projects that don't have any issues. The projects that
16 should be almost common sense.

17 We need to have -- we also need to have a process
18 for those projects, the ones that can be done quickly. And
19 I say quickly, because these resource agencies are spending
20 too much of their time dealing with a lot of things that
21 probably they don't have the time to deal with. So if the
22 -- if you can come up with a process to deal with those
23 projects on that other extreme, the ones that are simple,
24 the ones that are small, the ones that don't have issues,
25 that would be a real development. That would be a real

1 development as far as licensing and getting new hydro out
2 there. Thank you.

3 MR. HANSEN: Thank you. Any other questions or
4 comment from the audience on this question? All right, that
5 appears to be all on that one. Dustin, do we have any
6 questions or comments on the final question from any of the
7 phone participants?

8 MR. HAHN: I'm showing no questions at this time.

9 MR. HANSEN: Thank you, sir. So now is the last
10 chance to dance, I guess. If you have any further comments
11 or questions about anything we have talked about today, now
12 is the time to bring those up. So this is open for anyone
13 on either panel for the audience, for the phone numbers,
14 anyone. So I will first go to either of the panel. Does
15 anyone have any final comments they would like to make?
16 Thank you. And the audience, any wrap up? Mr. Brown
17 Kinloch?

18 MR. BROWN KINLOCH: Sorry.

19 MR. HANSEN: No, please.

20 MR. BROWN KINLOCH: I just have one final
21 question for the Commission as whether this process of
22 looking at the two year process is over until something else
23 happens or are you looking for more projects, looking to do
24 additional pilot programs along the way? And I just want to
25 mention, if you are, I've got a perfect project for you. So

Page 124

1 you just let me know. We're ready to go.

2 MR. HANSEN: I would be happy to try that, but I
3 think I'll defer to Mr. Yearick.

4 MR. YEARICK: Vince Yearick, hydropower
5 licensing. Well, the next step for this process is for us
6 to submit this report to Congress with our recommendations.
7 We're not soliciting additional two year pilots at this
8 time, but I think as you have heard from some of the folks
9 on the panels, they should have gotten that indication. If
10 you have a project that you think can be expedited, it can
11 be expedited under the current regs. So I would leave that
12 one to you.

13 MR. HANSEN: Thank you. Any other final comments
14 from the audience? Any final comments from anyone on the
15 phone, Dustin?

16 MR. HAHN: I'm showing no questions at this time.

17 MR. HANSEN: Great. Well, I'd like to thank all
18 of our panelists for the first and second panel for joining
19 us today. And if you don't mind, I'd like to take a quick
20 moment and give a round of applause, because I think they
21 did a fantastic job.

22 (applause)

23 And I'm going to turn this back to Tim for a
24 couple of closing comments.

25 MR. FURDYNA: Thanks, Ryan. Thank you again to

1 everyone for participating in the workshop today. I believe
2 the input we received is very informative and will help us
3 in assessing the effectiveness of the two year pilot
4 licensing process and the practicability of implementing a
5 two year process on a more programmatic scale.

6 As specified in our notice issued on January
7 30th, written comments are due by April 14th, 2017.
8 Guidance on how to file written comments is provided in that
9 notice. In addition, you may submit your written comments
10 today to the court reporter in the back of the room. A
11 transcript of this meeting will be made available under the
12 docket for this proceeding, which again, is AD-13-9-000.
13 All right.

14 MR. HANSEN: Thank you, again, everyone. Our
15 workshop is now adjourned.

16 (Whereupon at 4:28 p.m., the meeting was
17 adjourned.)

18

19

20

21

22

23

24

25

Page 126

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26

CERTIFICATE OF OFFICIAL REPORTER

This is to certify that the attached proceeding
before the FEDERAL ENERGY REGULATORY COMMISSION in the
Matter of:

Name of Proceeding: Hydropower Regulatory
Efficiency Act of 2003

Docket No.: AD13-9-000
Place: Washington, DC
Date: Thursday, March 30, 2017

were held as herein appears, and that this is the original
transcript thereof for the file of the Federal Energy
Regulatory Commission, and is a full correct transcription
of the proceedings.

Larry Flowers
Official Reporter

<p style="text-align: center;">A</p> <p>ability 37:17 40:4,6 92:24 93:8</p> <p>able 7:4 11:16 15:4 23:4,5,21 25:14 25:20 28:1,3 32:24 39:5 43:17 44:17 46:25 53:18 54:4 81:1 92:11 93:14 95:2 98:1 98:21 100:10 105:12 119:21,22 122:6</p> <p>abroad 47:20</p> <p>Absaroka 55:16</p> <p>absence 20:8 33:13 33:25 34:8,10,14</p> <p>absolute 74:19 112:19</p> <p>absolutely 26:9 30:13 50:23 82:5 91:6</p> <p>accelerated 68:4</p> <p>access 20:6,15,16 21:4</p> <p>accommodate 20:1</p> <p>accomplish 88:24 89:2 104:5</p> <p>account 69:13 79:5</p> <p>accurate 33:10</p> <p>accurately 70:3</p> <p>achieve 37:1 104:11</p> <p>acid 46:21</p> <p>acknowledge 6:24</p> <p>acquire 69:8 80:25</p> <p>acquired 17:23 18:6</p> <p>acquiring 96:14,14</p> <p>act 1:3 4:8,11 6:2 9:17,18,19,20,24 10:1 13:5 17:22 19:23,24,25 36:20 56:9,10 72:16 81:6 98:19 101:10 108:8 110:7,9 111:11,22 126:7</p> <p>action 27:25 60:1 115:12</p> <p>actions 111:2</p> <p>active 46:3</p> <p>actual 19:10 23:12 50:13</p> <p>AD-13-9-000 4:7 125:12</p> <p>AD13-9-000 1:5 126:17</p> <p>Adamson 36:24</p>	<p>adapted 101:10</p> <p>add 14:18 18:21 25:7,8 33:21 52:21 65:1 67:16 77:19 79:11 84:25 86:15</p> <p>added 51:13 60:8 113:24</p> <p>adding 67:24 98:25</p> <p>addition 4:14 72:21 73:5 125:9</p> <p>additional 15:7 17:5 23:17 24:18 44:9 47:14 61:17 63:1 69:3 72:11,22 117:25 119:11 123:24 124:7</p> <p>additionally 21:7</p> <p>additions 34:16</p> <p>address 16:14 81:16 86:7</p> <p>adequate 73:13</p> <p>adhered 88:16</p> <p>adjourned 125:15 125:17</p> <p>adjust 90:15</p> <p>adjusted 89:24</p> <p>adjustment 90:15</p> <p>adjustments 90:21</p> <p>administration 113:23</p> <p>admit 38:23</p> <p>advance 53:7 55:8</p> <p>advantage 93:22 95:6</p> <p>adverse 17:7 24:13 52:5,6 102:14,15</p> <p>adversely 21:1 39:7 39:9 58:3</p> <p>advice 95:7</p> <p>advocates 64:5</p> <p>affect 21:1 29:18 39:9 58:3 72:14 92:23</p> <p>affiliation 8:19,24 47:15 70:2 106:12 121:14</p> <p>afternoon 4:3 5:8 5:21,22 10:19,24 11:2 55:10 56:5 56:20 67:1 88:11 88:12 89:1 96:5 102:12</p> <p>agencies 25:10 31:11 40:7 46:2 46:13,14,25 47:8</p>	<p>48:11 63:23,24 64:6 69:18 72:8 77:5,18 79:10 80:8 83:23 85:10 87:20 91:17,24 94:17,22 103:3,20 104:5 105:7,18,22 107:23 108:15 112:16 114:8,15 115:1,25 116:1 119:16,17 121:9 122:19</p> <p>agency 12:2,4,5 14:16,17 19:20 23:22 27:14,25 28:10 30:11 37:15 37:20 47:22 52:14 56:25 66:5 75:8 83:10 85:15,17 86:17 87:8 97:10 105:8 112:16 115:11 119:5,8</p> <p>agency's 20:1 21:17 37:16 41:23,25 66:5</p> <p>agenda 5:14</p> <p>agent 116:18</p> <p>ago 16:20 67:9 94:14,15 109:22 109:22 122:5</p> <p>agree 30:15 43:1 65:24</p> <p>agreed 7:12 22:21 107:23</p> <p>agreeing 21:3</p> <p>agreement 19:4,9 19:14 21:13 29:25 47:8,9 51:11 90:2 107:24 116:11</p> <p>ahead 24:2 33:18 34:16 38:22 41:15 48:24</p> <p>Albany 56:23</p> <p>align 69:4 76:23 77:2,3 116:10</p> <p>Allegheny 93:12</p> <p>alleviate 97:15</p> <p>Allison 2:9 12:18,18 16:2 20:3 27:10 33:20,23 38:19 43:1 51:1</p> <p>allotted 30:11</p> <p>allow 54:3 78:4 79:5 89:17</p> <p>allowed 5:12 23:4 27:3 32:3 105:9</p>	<p>allowing 55:11 90:14</p> <p>allows 64:10</p> <p>alluded 119:2</p> <p>alluding 87:19</p> <p>ALP 86:4</p> <p>alternative 87:17</p> <p>amazing 97:21</p> <p>amended 98:21,23 111:22</p> <p>amending 98:19</p> <p>American 57:8</p> <p>amorphous 83:18</p> <p>amount 21:25 27:15 28:6 34:19 79:20 112:22</p> <p>Amy 2:22 56:5 70:15</p> <p>analysis 36:1 59:18 63:12,13</p> <p>analytically 97:2</p> <p>Ann 94:12</p> <p>answer 30:17 35:17 35:20 42:10 56:14 71:5,7,11,17,18 71:20 76:1 79:15 83:16 87:10 91:8</p> <p>answerable 13:21</p> <p>anthrax 85:16</p> <p>anybody 80:8 83:14</p> <p>anyway 107:9</p> <p>apart 90:5 121:4</p> <p>apologize 71:18</p> <p>Appalachian 106:16 121:25</p> <p>appear 7:4 116:25</p> <p>APPEARANCES 2:1</p> <p>appearing 17:12</p> <p>appears 123:5 126:20</p> <p>applause 124:20,22</p> <p>apples 45:7,8</p> <p>applicability 65:10</p> <p>applicable 64:14</p> <p>applicant 11:22 27:13,25 39:1,5 65:5,18 72:7 80:14 88:18</p> <p>applicant's 41:25 58:8</p> <p>applicants 57:3 72:25 85:11 94:16 101:19,23 114:7 114:13,16,18</p> <p>application 15:15</p>	<p>15:17 21:25 22:2 25:18 27:2 47:7 60:18 77:25 86:3 97:24 99:24 105:20 108:8,11 117:14,15</p> <p>applications 42:1 57:4 96:8 103:5</p> <p>applied 73:4 96:7 96:25 97:1 99:22 121:5</p> <p>apply 38:6 45:9 102:25 114:8 120:18</p> <p>applying 18:13</p> <p>appreciate 17:17 25:21 34:24 110:17,23 117:10</p> <p>appreciating 66:20 116:23</p> <p>appreciation 31:10</p> <p>appreciative 18:17 25:9</p> <p>approach 62:8 88:24 96:16</p> <p>approached 18:13</p> <p>appropriate 9:7 34:18 49:3 67:24 68:9 113:25</p> <p>appropriately 81:16</p> <p>approval 45:25 58:13</p> <p>approvals 35:6</p> <p>April 34:11 53:21 56:16 125:7</p> <p>Aquanovis 47:18</p> <p>aquatic 16:9,15 61:3</p> <p>aquatics 16:12,15</p> <p>Aquinovis 121:18</p> <p>archeological 17:5</p> <p>Archimedes 64:13</p> <p>area 20:17 21:24 24:9 58:9 85:15 86:5 95:14 117:17</p> <p>areas 20:20 34:19 64:12 91:13 114:2 114:19</p> <p>arguments 83:2</p> <p>Army 56:6</p> <p>arrangements 53:7</p> <p>arrive 54:2,3</p> <p>arsenal 81:21</p> <p>artificial 89:19</p> <p>artificially 90:14</p> <p>ascertain 6:9</p>
---	---	--	---	--

Hydropower Regulatory Efficiency Act of 2013 - March 30, 2017

ash 46:21	authorities 15:25 116:4	basic 117:1	91:10 93:23 98:10	buoys 116:22
asked 58:24 66:24 67:16 98:9 120:20	authority 12:2 18:4 18:12 45:16 76:2	basically 12:13 22:14 44:11 51:26	102:21 110:15 112:21	burden 46:20 81:10 82:22 91:15,17 97:5 118:13
asking 66:20 97:21 113:1	112:20 117:2	basin 93:7,10 114:14,22	Blackstone 64:19	burdens 118:4
asks 74:25	119:18 120:10,13	basis 86:12 88:14	bless 105:8	buried 115:21,21
aspect 48:23 80:18	authorization 4:12 72:15,23	bat 34:4 43:12	blessing 46:11 105:7,22	business 25:12 62:20 122:5
aspects 4:12 16:24 117:14,18	authorizing 61:7	bathroom 54:5	blue 46:20	Butte 55:17 59:12 78:24 79:8 90:1
assert 65:13	authors 36:24	Bathrooms 5:16	board 12:5 24:25 25:2,4 45:15,16 80:2 84:13 108:9 108:19	buy 81:15 90:3
assess 13:23	automated 102:10	bats 16:13	BOEM 91:13	<hr/> C <hr/>
assessing 52:5 125:3	availability 6:20	bays 5:17	bone 74:24	C 4:1
assessment 77:12 93:12 100:2 102:9 114:9 118:7	available 5:16 20:21 31:12 43:18 102:17 125:11	bear 62:4 81:9 111:13,15	books 50:22	cabinet 39:25
assessments 27:19	avenue 90:6	began 63:21	Borgquist 2:20 55:15,15 58:22,23 61:18,19 77:21,24 82:10 84:7 85:2 87:18 89:5,7,9,14 104:16,16,19 112:24,25 118:10	call 15:15 27:20 42:19 49:12 57:3 65:16 75:14 97:8
asset 114:9	avoid 9:14 16:10 55:1 69:10 104:23 104:23 105:23	beginning 4:24 11:19 28:13 36:16	boundaries 105:11	called 22:8 51:10 98:8
assets 117:23 118:7 118:8	avoidance 39:5,12 43:19 51:13	behalf 12:3 14:23 109:5	boundary 117:18	callers 8:8
assigned 109:25	avoided 59:6 105:25	believe 28:20 34:18 50:11 53:25 60:17 63:2 82:25 125:1	box 15:20	calling 15:22 51:8
assist 114:13	aware 6:1,18 28:15 38:24 39:2 56:17	believed 62:10	boxes 83:18	calls 24:1
assistance 91:11		beneficial 109:4	branch 10:21 54:12	candidate 13:12 14:14 43:11
assisting 114:21		benefit 8:14 41:8 118:22	brand 109:23,23,24	candor 109:16
associate 7:16		benefits 41:5 81:5,7	Brantly 28:19	capacity 11:14 100:9 120:21,22 120:22
associated 48:16 86:25	<hr/> B <hr/>	best 10:3 20:21 35:20 41:10 43:18 70:22 71:17 73:3 73:19 76:23 92:3 92:6,7,11 101:10 103:25 118:12	Brazil 48:1	capital 26:5,6 35:4 80:20
assuming 96:18	back 5:17 9:1 19:3 21:3 23:21 25:3 29:4 30:6 33:19 33:24 37:14,14,21 39:18 46:1 51:16 54:5 61:17,21 62:15 67:7,11 68:14 73:23 79:2 85:17 87:10,11 90:19 92:14 97:7 98:25 100:5 105:2 113:22 124:23 125:10	better 40:14 48:9 69:4 71:9,18,20 94:2,8 103:20 110:18 116:10 119:16	break 5:14 53:24,25 54:3,7,8 60:2 115:14,14	capture 69:18
assumption 100:7	background 8:22 50:1	big 15:3,4 16:3 64:10 81:21 104:22 116:20 117:6	breaking 60:15	carbon 37:5
assurance 80:4,10 81:7 92:12 118:19	badly 62:19	bigger 48:14 69:5 77:4	brief 4:21 5:14 9:16	care 20:19 60:10 85:25 86:1 114:3
attached 75:15 126:3	balance 6:13	biggest 15:11 46:13 46:24 50:2	bring 47:25 63:14 66:16,21 79:6,7 111:13,15 123:12	careful 55:8
attempt 103:25	balancing 6:16 81:6	Bill 56:21 92:5	bringing 85:21	Carl 2:20 55:15 63:20
attempts 72:18	bank 80:4	billion 84:14 113:14	British 59:21	Carol 2:11,25 17:19 33:16 34:16 35:13
attend 109:8	barrier 73:25 74:5 87:5 115:15	biological 33:25	Brock 46:16	Carrie 2:9 12:18 16:1 19:21 20:2 22:6 27:9 28:25 33:13 38:18 42:25 45:22,22,25
attention 122:14	barriers 94:3	biologist 7:19 12:21 16:5 54:11	broken 22:24 59:18	carried 84:22
attorney 4:9 56:22	barring 116:12	biology 43:14	brothers 90:11	carrot 102:1
attorneys 57:1	bars 36:1	bit 16:25 28:16 40:14 48:9,14 49:25 51:2,17 55:3 66:3 68:12 82:7 84:3,16	brought 4:22 28:3,4 62:4 94:11 98:3	case 12:3 15:16 19:13 21:12 22:5 22:6 23:13 24:8 29:13 30:1,4 31:2 39:8 51:16 65:14 65:14 88:14,14,25 98:6
attract 56:1 57:9,10 85:5	based 20:21 21:2 24:13 88:13 89:4 118:15		Brown 2:16 44:23 44:23,24 106:15 106:15 121:23,24 121:24 123:16,18 123:20	cases 9:15 25:11,13
attracting 26:6	baseline 73:13		bucks 81:14	
attractive 26:5	bases 22:17 23:11 38:4		build 94:21 114:18	
audience 8:17 17:10 17:14,15 19:16 26:17 31:17 36:8 41:23 44:20 53:12 56:12 57:23 69:21 71:22 81:23 95:24 106:9 108:21 121:12 123:4,13 123:16 124:14			building 50:6 82:24	
audio 54:18			built 18:25 67:10,12	
audio-visual 5:11 9:1			bunch 53:1 119:10	
augment 75:2 102:4				
August 9:19				

<p>32:21 55:2 70:22 87:12,22 categories 59:18 caught 82:8 cause 5:11 54:18 58:1 caution 93:6 caves 34:5 cell 5:10 8:13 54:17 century 85:19 CEO 11:21 55:16 cert 49:17 75:25 certain 6:4 24:10 31:9 35:22 41:11 41:11 64:8,12 66:1,16 70:4 83:9 84:5,5 88:21 112:22 certainly 6:12 18:16 25:13 31:1 33:3 33:10,14 34:24 71:9,12,18 72:19 75:8 78:22 91:23 92:1 96:21 98:25 112:22 113:22 120:23 certainty 26:10 41:9 88:19,20 89:21 certificate 56:24 75:21 126:1 certification 12:9,16 15:13,19,22 21:20 22:8,20,23 23:3 23:12,15 34:22 35:25 37:23,25 38:5 49:10,13 75:17 certifications 22:16 50:7,15,16 96:14 certify 126:3 certifying 56:24 66:5 certitude 63:8 cetera 53:5 chair 2:3,19 57:11 Chairman 2:14 5:8 36:12,14 37:13 82:5,6 83:20,25 84:23 109:7,10 110:22 challenge 32:1,13 68:10 challenges 30:9 31:1,3,14 32:9 33:4 41:4 78:16 78:24</p>	<p>chamber 30:4 chance 11:18 24:18 123:10 change 19:1 23:8,19 24:22 58:1 59:23 84:2 112:13 113:4 changed 22:7 25:3 46:6 changes 24:9 43:15 46:8 51:5 100:23 changing 45:16 104:12 characterize 60:10 charge 110:6 check 8:8 checked 83:18 checklist 92:7 Cheryl 2:14 chime 99:9 Chloe 28:19 choose 34:13 89:17 92:1 chooses 68:18 circumstance 116:13 circumstances 116:5 city 29:14 civil 12:1 clarification 22:19 clarified 28:17 clarify 104:13 clarity 26:11 30:23 109:16 clause 51:4 clean 19:23 56:9 82:25 clear 15:2 29:2 30:19,19 41:15 60:12 63:23 82:12 119:15 clearances 103:14 cleared 28:17 clearer 26:9 92:2 clearly 89:11 116:13 120:24 Clinton 113:23 clockwise 55:13 111:7 close 42:19 49:15 58:25 82:24 closed 4:6 6:5 9:22 29:15 55:17 58:15 111:4 closely 44:2 64:4 117:7</p>	<p>closing 124:24 coal 46:21,22 coalition 57:12 74:4 Coast 5:25 codes 113:18 codification 74:22 codify 73:19 78:18 78:19 82:14 83:21 coin 61:14 Colette 2:5 collapsing 46:21 colleagues 7:2 collected 21:23 collecting 30:11 collective 7:6 color 44:24 combination 118:6 come 23:24 25:14 31:5 44:16 47:1 48:17,19,20 60:11 61:11,21 64:16 78:6 79:2 97:13 97:15 98:17 105:2 105:24 106:23,25 113:10 117:4,4 122:22 comes 9:8 22:18 60:13 82:15 85:17 86:24 87:3 88:19 88:20 comfort 21:9 51:17 comfortable 21:14 51:11 coming 24:1,2 34:6 34:12 48:15 61:20 75:17 78:15 90:22 95:5 101:16 112:11 commanding 62:22 commence 22:22 commencement 66:6 comment 4:4 9:6 30:9 44:4,19 48:6 62:2 63:20 70:10 70:11 73:21 112:13 123:4 comments 4:25 9:5 10:12 17:11,14 18:15 26:17,19 30:15 31:17 42:2 49:1,1 53:12,13 53:18,20,22 65:8 65:21 67:17 68:15 68:18 69:22,24 71:21,23 81:24</p>	<p>82:2 84:1 89:20 94:5,7 95:25 96:2 98:16 106:11,17 107:11 108:20,23 109:16 110:17,20 111:9 113:2 121:12 123:6,10 123:15 124:13,14 124:24 125:7,8,9 Commerce 94:13 commercial 29:16 commission 1:1,7 5:13 6:22 9:20 10:2 12:13 35:9 36:22 42:7 56:21 65:19 72:8 73:8 73:19 74:6 76:7 80:15,17 81:19 89:2 91:11 92:7 92:15 95:4,13,18 96:16 97:9,20 98:10 99:3 107:24 108:3,7,17 109:5 111:2,10 113:25 114:13,16 118:5 118:21 119:3 120:8 121:1,5 122:2 123:21 126:4,22 Commission's 4:3 18:8 53:22 72:19 97:11 119:21 Commissioner 2:5 4:18 5:10,18,20 7:9 109:17 commit 92:10 94:22 commitment 26:13 36:16 117:8 Committee 36:23 94:14 common 40:1 50:6 75:16 122:16 commonality 91:21 91:21 Commonwealth 12:4,16 19:11 31:5 communicated 25:11 116:14 communicating 30:21 103:11 115:3,4 communication 27:16 29:1 30:16 42:20 85:7,9,18 85:19 113:6 115:7</p>	<p>community 56:15 68:1 90:12 114:21 community's 121:9 companies 89:7 company 64:9 89:13 109:22 111:19 Company's 47:18 compare 47:4,19 compared 46:23 comparison 45:8,11 47:2 competing 92:16 110:11 complaint 80:19 complete 9:25 15:15 15:16 32:1 47:9 50:9,10 102:11 completed 9:14 32:13 55:1 116:12 completeness 75:21 completing 30:10 complex 94:19 122:11 complexity 77:19 complicating 77:15 complications 23:6 complying 77:19 components 22:4 59:17 comprehensive 93:10 101:11 120:25 compressed 101:25 118:17 compression 66:13 66:16 76:12 compromise 6:21 compromising 23:2 computer 102:11 concept 15:17 111:23 concepts 76:25 conceptually 58:8 73:24 74:11 concern 17:3 48:10 65:9 68:7 75:7 76:3 concerned 29:9 75:8 concerns 16:19 71:15 concise 88:1 concluded 63:16 concludes 38:12 concur 24:13 74:20 concurrent 51:14</p>
---	---	--	--	---

Hydropower Regulatory Efficiency Act of 2013 - March 30, 2017

<p>concurrency 20:25 21:12 51:9 52:9 concurrences 35:10 96:15 condition 22:11,16 32:23 101:1 conditional 20:24 24:5,6,8,12 35:6 35:10 51:3,8 92:9 conditional's 51:2 conditioned 22:15 conditioning 119:18 conditions 22:20 53:4 58:23 96:21 121:6 conduct 10:2,9 31:22 conduit 92:8 conference 109:12 109:15 confidence 105:10 confirm 95:3 confirmation 73:24 confront 75:22 76:11 confusion 28:13,16 116:6 Congress 6:2,8 9:19 10:11,17 35:21 36:20 37:10 79:3 100:5 120:9 124:6 Congressional 7:22 connected 58:16 Connecticut 110:1 Conservation 56:23 consider 14:2 58:24 61:13 70:20 81:19 99:4 considerable 6:14 consideration 55:9 92:19 considerations 100:18 considered 51:6 57:25 70:13 considering 42:18 consistent 32:18 86:12 consistently 96:7 consortium 57:12 constantly 43:14 constituent 98:2 constituents 29:13 constraining 63:13 constraints 28:15 37:24 63:3</p>	<p>constructed 11:12 99:7 construction 21:5 21:14 22:22 29:19 49:16 50:9,10,13 51:12 53:5,8 96:24 consultants 84:13 consultation 12:21 16:5 31:17 35:24 39:4,10 51:7 60:9 60:19 66:4,7 67:8 73:14 75:9 87:24 88:1 consultative 60:14 consulting 19:22 consume 34:19 consuming 96:17 contact 56:7 contained 14:6 contemplates 76:12 context 25:18 113:18 contingent 26:14 continue 35:9 38:13 38:16 95:17,21 110:20 111:7 115:18 116:16 117:8 continued 118:5 continues 115:17 116:16 continuing 114:25 continuously 58:16 contracting 53:8 contributed 14:19 control 64:2 67:22 94:18 controls 62:11 controversial 107:23 108:9 controversy 73:12 conventionally 45:2 conversations 15:1 69:12 conveyed 70:17 cooperating 112:15 115:11,25 coordinate 21:6 coordinated 37:15 coordination 33:24 39:19 coordinator 7:20 13:1 39:1 copy 103:15 corners 75:3</p>	<p>Corp's 68:22 Corps 56:6 69:1,9 69:14 73:22 74:6 74:15 75:7 76:19 76:25 77:1 86:18 87:4 102:23,23 115:2,4 116:2,8,9 116:11,14,16 119:22 120:11,13 Corps' 56:15 correct 51:9 62:10 126:22 corridor 64:19 cost 34:20 77:6,20 86:25 costly 6:18 costs 6:19 77:8 87:4 Council 51:20 counsel 4:10 7:16 7:17 13:2 45:19 56:22 count 121:21 Counties 5:4 11:9 country 13:17 47:19 57:13,17 75:3 91:13 couple 5:9 28:19 36:15 45:4 49:10 67:19 73:2 84:20 93:4 94:14 99:16 100:19 101:11 120:4 124:24 coupled 117:18 course 79:16 87:3 88:8 105:14 110:4 court 8:14 17:17 31:19 47:15 70:3 125:10 cover 31:7,13 32:11 33:2 covered 23:11 38:3 76:16 covering 22:17 38:7 cracking 120:9 cracks 28:3 create 89:19 116:6 created 112:1 creating 78:13 creative 25:23 83:11 creatively 98:11 criteria 13:18,22,22 14:4,5,7,11 57:20 57:24 58:19,20 59:7,14,14,17,23 60:6,22 61:4,5,15</p>	<p>61:17,22 62:25 63:2,4,11 64:21 64:24 65:12,13,13 65:22 66:7 67:18 68:2,15,18 69:23 72:10 74:12,13 91:14 120:19 121:6 criterion 60:16 61:8 critical 62:17 cross-section 7:11 cue 9:7 cultural 10:23 17:5 33:11 114:5 culture 78:11,19 82:8,12 84:2,21 94:10,10 95:13 97:7,7,18 113:15 cultures 103:3 cumbersome 39:14 curious 49:11,11,15 current 40:24 124:11 currently 19:6 48:6 64:17 cursor 95:1 curve 48:15 cut 48:11</p> <hr/> <p style="text-align: center;">D</p> <hr/> <p>D 4:1 D.C 1:9 27:15 85:15 daily 28:22 dallying 80:15 dam 5:2 10:7,23 11:8,11,16,23 12:7 13:12 14:10 14:13,16,17 18:12 19:2,11 24:11,14 26:3 29:11,15,21 38:9 45:5,6,7 46:23 47:5,5 51:21,22 54:14 58:6,7 67:25 70:9 70:16 77:16 81:11 81:15 100:21 111:17 dams 4:6 6:5 9:22 12:6 32:20 37:3 57:14 60:5 64:10 64:15 67:21 70:13 70:21 73:22 74:1 80:21,24 81:12 100:23 111:4 112:6,11 Dan 36:24</p>	<p>dance 123:10 dancing 79:17 data 21:22 50:1 51:10 date 26:13 30:21 43:20 88:21 126:19 dates 30:20,20 41:15,16 David 2:7,16 12:1 14:15 18:12,20 24:17 29:5 40:18 42:12 44:23 106:15 121:24 Dawn 28:18 day 36:18 45:24,25 71:8 79:1 84:22 days 15:15 23:14 39:11 65:20 111:23 DC 126:18 deadline 24:3 88:19 88:20 deadlines 30:17 31:25 32:4 52:19 deal 43:10 47:21 67:10 78:5,15 83:5,24 90:5 92:14 114:5 122:21,22 dealing 19:6 40:24 46:19,20 71:12 78:25 122:20 dealt 29:23,24 83:23 122:6 death 106:20,21 decades 109:22 decide 38:14 decided 101:19 decision 65:20 76:23 114:1 decisions 13:8 62:18 113:8 declined 58:25 dedicated 40:12 113:6 deemed 38:2,3 defensible 79:19 defer 70:25 124:3 deference 119:17 defined 90:8 defining 99:20 definitely 14:23 38:10 48:19 76:20 77:9 definition 74:11</p>
---	---	---	---	--

Delaware 64:18	119:23 120:14	9:5,16 16:25 57:5	drug 90:1	6:2 9:17 67:23
delay 103:17 109:3	122:10,25 123:1	59:11 66:9,25	due 10:17 125:7	111:11 126:7
demonstrate 64:11	developments 63:21	89:4 94:1 109:5	duplication 104:8	efficient 6:3 103:19
demonstrated 96:12	116:20	118:15	duplicative 120:10	104:4 106:7 113:8
depart 53:19	dialogue 118:12	discussions 9:10,12	duration 112:23	efficiently 6:23 27:3
Department 12:10	difference 82:17	11:1 14:24 54:23	Dustin 2:12 8:8	79:18 100:15
56:23	83:6 98:8	disincentive 79:25	19:16 26:18 36:8	effort 77:8 103:1
depending 22:12,13	differences 100:11	111:18,21	42:1 53:12 71:23	efforts 53:16 66:10
32:22 38:11,12	different 13:21	dispatchable 37:5	71:25 82:1 96:1,4	117:22,25
42:21 77:15	22:11 32:20,21	dissolved 101:1	108:23 123:5	eight 85:13
117:15	38:20,21 39:15	distinct 97:23	124:15	EIS 77:10
DEPs 63:22	45:15 46:5 50:19	distinguish 100:10		EISs 91:14,18
describe 59:23	61:17 63:1 68:16	district 86:19	E	either 17:21 64:4
described 34:21	74:9 79:5 83:23	diverse 57:12	E 4:1,1 105:2,21	68:22 106:10
describes 10:12	84:1 86:21 99:6	diversion 90:3	EA 75:18,20 84:16	113:10 123:13,14
design 16:21 17:1	101:17 102:21	diversionary 98:6	97:24 102:7	electric 109:21
24:10 25:18 31:3	103:3,3 106:25	divert 90:3	105:19	element 67:14
32:22 33:3 51:21	110:10,11 111:16	dividends 115:16	ear 43:12 82:8	102:17
53:8 113:8	116:5	division 4:11 7:15	earlier 18:14 30:18	elements 17:6 24:10
designs 15:8	differently 86:18	7:17,20 8:2,4	30:24 39:22 66:25	66:22 96:6
determination	difficult 14:8 38:19	10:21 12:10 54:12	69:4 71:7 88:11	elevator 5:17
10:17 14:10 21:2	39:17 68:12 72:12	doable 14:23 93:2	115:15 120:20	eligible 13:4 17:7
21:15 39:9 51:17	79:23 80:12 83:10	docket 1:5 4:7	early 15:1 18:13	51:22,25 52:7
68:7 84:4,5	106:22	105:23 125:12	19:3 23:23 25:20	email 27:19
102:14 119:14	difficulty 63:19	126:17	28:4 29:1 33:24	emails 24:1
determine 6:3 20:6	dig 37:6	docks 116:22	34:6,12 39:19	emphasized 64:7
65:10 70:18 94:17	dilly 80:15	document 27:1	52:17 60:13 64:1	enacted 9:19
develop 6:3 10:4	direct 13:7 19:20	72:19 93:15 99:19	73:14 88:1 90:22	encounter 75:23
19:4 92:7	35:14 42:5 49:5	documentation	94:21 95:19	encourage 66:15
developed 26:23	56:13 58:22 120:7	60:19 69:9 115:22	104:20,24 105:9	90:18
29:3	directed 6:2 32:8	DOE 36:17 114:6	EAs 91:14,18	encouraged 117:21
developer 11:24	59:2 71:2	114:10	easier 16:14,16	encouraging 66:13
52:25 62:24 70:11	directing 72:3	doing 8:19 23:3	easiest 20:6 83:7	endangered 19:23
78:4 79:6 83:22	direction 90:17	27:12 37:18 38:10	echo 16:19 85:2	20:18 21:23 58:4
90:23 94:20	95:16,22 101:17	38:16 40:22,23	economic 10:16	61:10 77:17 110:9
112:21 113:4,7	120:2	42:14 46:22 60:13	13:24 14:3 15:9	ended 15:19 20:19
115:4 116:7,14	directly 30:18 48:16	63:16,17,19 84:18	72:1,24 77:4	22:7 63:18 79:1
119:6,9 121:20	115:18,23	95:14 100:20	economy 118:1	energies 118:2
developer's 77:21	director 7:14,17	104:14 105:15	education 114:20	energy 1:1,7 4:10
89:15 121:8	17:20 35:16 57:8	114:6	EERE 91:11	7:15,17,18,19
developers 55:17	94:12	dollar 84:14 113:14	effect 6:19 17:7	12:12 36:23 55:16
62:11 63:5 68:21	directors 80:2	door 66:19	24:10,13 39:7	56:7 82:25 94:13
77:4 87:19 91:15	disappointment	downstream 90:3	effective 42:11,18	94:13 109:24
92:2 95:5 97:6	101:20	dozen 57:17 80:23	42:23 43:19,24,25	126:4,21
103:23 104:14	discharge 117:2	draft 27:2 97:23	44:7,12 47:3	enforce 97:14
developing 28:22	disciplines 57:2	99:24 105:23,25	65:24 89:18	enforceable 112:18
63:14	discretion 97:21,22	117:13	effectively 6:23	engage 94:23 103:9
development 6:7	97:25 98:10 100:8	drafted 28:20	34:25 42:22 103:9	103:10,21 115:10
9:22 11:7,21	discuss 9:13 54:25	105:19	effectiveness 4:4,25	115:11,13
13:16 17:21 22:23	55:4	drainage 46:21	9:10,13 10:10	engaged 57:16 65:4
26:7 37:2 57:10	discussed 73:14	dream 89:15	42:8 43:24 44:1,4	93:18 94:6 105:6
58:8,14 70:7,22	87:6 98:4	dredge 117:3	45:1 54:22,25	engagement 95:18
78:5 79:6 80:12	discusses 66:4	drinking 56:3	125:3	115:19,20
83:15 85:13 87:13	discussing 4:13 5:5	drinks 5:12	effects 6:14 13:4	engaging 115:15
87:13 90:12 91:12	9:15 49:4 55:1,10	driver 80:11	52:5,6	engineer 12:2
101:10 111:3,19	discussion 4:16 7:12	dropped 91:18	efficiency 1:3 4:8	engineering 22:3

Hydropower Regulatory Efficiency Act of 2013 - March 30, 2017

<p>53:8 112:9 Engineers 56:6 England 17:20 47:18 64:16 80:24 enhanced 102:18 120:23 Enjoy 109:17 enormous 97:25 ensure 115:15 116:12 ensuring 115:3,9 118:11 entered 73:13 entire 21:11 66:12 entirely 33:25 entities 42:15 103:23 entity 58:12 entrainment 33:12 envelopes 32:4 environment 6:15 environmental 7:19 10:16 12:11,14 13:1 14:2 15:8 16:4 21:22 47:22 49:24,25 56:23 60:2 72:1 77:12 91:24 93:12,18 94:20 100:1,18 102:8,9,13 114:5 environmentalist 82:24 envision 116:2 equal 112:1 equipment 5:11 54:18 equivocate 79:14 ESA 35:24 39:3 especially 7:1 46:11 46:12 77:9 essentially 15:17 22:9,10,18 63:12 70:23 established 58:10 establishing 68:4 Estill 5:3 11:9 et 53:5 etcetera 96:15 Europe 121:18 evaluate 117:22 evaluating 13:14 116:21 event 60:5 66:6 75:9 88:8 events 32:10 66:12 75:15</p>	<p>eventually 85:16 everybody 4:2 27:7 29:2 30:20 31:15 41:20 85:21 91:3 92:18,18 111:8 everybody's 108:9 108:18 everyone's 66:10 121:7 exact 46:10 exactly 23:4 34:20 example 81:2 85:12 89:25 93:14 94:19 examples 100:19 Excellent 95:25 exceptional 116:13 excessive 63:3 excluded 70:23 exclusive 120:13 excuse 31:21 58:11 104:16 exempted 55:24 exemption 63:18 111:12 exercise 88:13 exhibit 105:1,21 existing 6:4 11:8,11 11:12 18:25 32:22 46:23 58:2 64:15 84:11 96:6,11 97:3 98:1 100:8 100:22 102:5,25 103:2 104:21 105:21 107:12 108:6 111:3 112:6 112:7,10 113:11 exit 68:8 112:4 expand 37:9 expanded 111:11 expect 18:18 104:1 expectations 30:23 expected 23:4 32:1 63:25 91:16 expedient 6:17 expedite 59:9 96:7 100:1 104:21 expedited 11:3 37:17 124:10,11 expediting 100:14 101:5,8 expedition 89:3 expense 100:17 101:9 expensive 96:18 experience 32:15,25 36:19 37:7 75:3,4</p>	<p>75:24 79:23 95:10 98:14 101:18 119:6 experienced 66:15 118:12 experiences 7:6,6 11:17 84:2 expertise 116:25 experts 7:4 57:1 expired 43:8 explain 23:25 25:4 82:7 110:5 explicitly 69:14 exploit 97:8 explore 102:3 expressed 65:9 expressly 47:18 extend 81:2 extensions 31:10 extent 60:8 extra 64:1 extraordinarily 80:18 extreme 122:14,23 extremely 30:25 73:20 eyes 118:18</p> <hr/> <p style="text-align: center;">F</p> <p>faced 30:10 faces 57:4 facilitate 111:3 facilitated 15:9 16:17 facilities 6:5 74:15 116:22 120:15 facility 11:11 19:14 77:16,25 82:25 101:1 fact 59:8 66:3 89:4 91:23 factor 57:6 75:14 100:12 118:2 factors 13:23 14:2,3 14:19 15:9 50:10 72:2 73:11 77:15 77:22 81:24 118:6 failed 75:10 failure 67:6,6 fairly 12:4 29:14 31:23 32:18 64:11 64:11,20 100:23 falling 87:23 falls 67:7 121:4 familiar 63:24 fantastic 124:21</p>	<p>far 5:24 7:7 14:23 15:4 16:20 19:11 21:23 24:4 27:6,7 29:7,8,19 30:4,6 37:24 38:7 43:23 44:11,25 50:1 69:9,11 71:12,15 71:15 74:2 80:13 93:19 113:22 123:1 fashion 55:13 111:7 fast 38:24 40:8,23 41:4 57:23 62:9 79:18 90:14 101:5 113:14 faster 67:25 84:15 84:16 99:21 100:15 fault 69:6 favorable 67:3 fear 90:11,13 feasibility 9:12,21 13:22,24 14:3,9 54:24 60:9 70:16 70:18 71:1,16 feasible 22:6 38:15 58:8 73:24 74:11 76:21 feature 58:17 features 101:22 federal 1:1,7 12:12 16:6 27:14 36:20 58:6 60:5 63:24 64:6 65:7 70:16 72:15 81:12 85:15 94:16 98:19 101:9 105:8 110:6 111:22 112:15 113:23 126:4,21 federally 16:9,11 58:3 feedback 42:14 103:22 104:1,11 feeds 14:3 62:2 feel 43:23 60:21 62:25 feeling 78:19 feet 90:1 fell 90:5 fellow 30:15 felt 14:23 43:17,21 51:15 78:24 FERC 4:19 6:12 7:23 15:14,21 21:18 23:1 25:19 25:24 28:21,22,23</p>	<p>29:7,24 30:6 31:11 34:18 35:5 37:23 39:1 40:11 40:13,19 43:25 48:18,22 50:17 54:13 55:23 57:20 59:2 62:5,7,14,14 62:18 65:10 68:18 69:7,17 76:18,19 77:2 78:3,11 79:9 79:10 80:14,25 82:7 83:1 84:18 86:16,17 94:10 97:7 98:14 102:22 103:5 105:9 112:16 113:3 115:2,5,5,10,18 116:3,4,8,9,11,23 119:14 120:10 FERC's 4:10 7:14 36:24 58:20 68:25 69:4,6 76:17 116:4 field 12:19 31:13 38:20,21 39:14 41:18 72:5 figure 23:1 25:15 35:18 37:8 59:9 62:7 82:6 83:17 104:20,23 figured 91:13 figures 119:10 file 53:21 80:16 94:7 125:8 126:21 filed 53:20 65:8 105:22 120:25 filing 10:1 107:14 108:17 fill 117:3 final 10:9 22:4,4,19 22:22 23:9,12,14 25:18 31:3 33:3 37:25 44:16 45:24 49:12,17 50:22 51:21,23 53:7 84:25 94:9 97:24 105:20 110:25 121:12 123:6,15 123:20 124:13,14 finalize 53:6 finally 9:9 10:11 58:15 financeable 41:13 financing 53:9 find 52:15 64:6 80:12 83:10,12</p>
--	--	--	---	--

<p>97:6 finding 74:4 83:13 fine 33:16 72:10 fine-tuning 65:12 finish 39:11 53:2 69:19 84:12 105:12 finished 45:5 105:18 firmly 62:11 first 1:8 2:2 4:14,24 5:15 8:7 10:24 11:17 13:6 20:11 22:24 28:16 32:6 36:21,21 42:7,20 48:6 51:26 54:21 55:6 57:19,19 58:22 63:21 65:9 69:21,25 73:3 75:10,20 85:15 89:20 95:24 96:8 96:12 98:16 105:24 106:10 107:16 109:11 111:9 117:12 119:1 121:13 123:14 124:18 fish 12:19 24:5 33:12 46:4,7 57:1 59:26 101:2 105:8 fisheries 54:11 fit 14:7 43:9 57:6 78:3 79:10 84:8 90:9 fits 87:21 88:22 92:4 five 12:22 17:1 46:2 63:9 79:21 80:10 81:2 92:12 95:11 121:21 fix 78:9,13 fixed 99:7 108:2 flag 17:3 flagged 69:4 flesh 74:23 fleshed 103:17 fleshing 76:9 flexibility 18:17 28:5 31:4,11 79:4 90:14,20 flexible 37:5 78:14 89:16 flood 67:22,22 flow 11:7 13:9 61:6 Flowers 126:24 flowing 58:17</p>	<p>flows 58:2 focus 55:3 61:9 89:3 91:19 focused 56:8 61:2 folding 106:19 folks 33:6 34:18 37:7 46:15 56:15 69:1 106:22 120:12 124:8 follow 27:21 33:14 103:23 following 5:15 59:1 65:8 98:16 99:14 food 5:12 footprint 16:7,12 20:10 forces 118:1 forefront 61:20 forest 55:20,22,24 55:25 56:1,4 65:3 65:6,8 72:14,15 72:18 75:6 85:22 98:17,20 form 64:9 102:9 formal 39:10 73:6 75:13 format 103:14 formatted 102:6 forth 44:13 106:4 forthcoming 57:3 forthright 82:18 fortunate 7:10 fortunately 65:3 forward 6:11 7:3,5 7:8 20:14 29:22 34:10 37:11 39:4 41:1 56:19 57:5 64:20 73:17 81:22 86:23 103:19 117:9 foster 37:1 fostering 118:8 found 10:15 20:15 80:17 fountains 5:16 four 46:3 77:11 111:1 118:25 121:21 fourth 46:6 96:5 98:18 120:16 frame 14:21 27:8 30:6 42:1 73:10 84:6 87:14 88:15 93:8 frames 32:2 34:8 39:16</p>	<p>framework 84:11 free 11:7 13:9 37:5 73:12 frequent 39:20 frequently 25:11 29:2 fresh 58:18 119:25 friendly 5:25 front 8:18 29:24 35:4 67:10,14 70:1,20 79:20,24 80:20 91:1 92:10 92:18 96:13 97:16 101:21 102:11 113:7 fruit 6:6 104:22 fruition 23:6 frustrating 66:22 frustration 67:6 fulfill 27:3 77:5 full 20:17 22:2 52:9 76:9 126:22 fully 28:15 30:15 32:12 44:3 94:22 118:14 funded 59:5 Furdyna 2:4 4:2,9 7:9,25 8:5,11 109:3 121:23 124:25 further 10:9 64:3 108:22 111:2,25 111:25 123:10 future 11:3 107:21</p> <hr/> <p style="text-align: center;">G</p> <hr/> <p>G 4:1 galvanize 30:20 game 68:12 106:7 gas 101:1 gather 79:19 gathering 4:25 general 4:10 7:16 7:16 14:2 17:13 22:12 38:7,9 44:15,19 48:25 50:15,15,16 56:22 88:22 generally 31:23 34:25 79:24 90:24 90:25 112:8 generating 11:13 generation 113:24 generator 64:13 generic 102:6,7 115:22</p>	<p>generous 55:7 geographic 99:20 112:9 geographically 91:21 getting 25:1 28:7 30:5 33:19 34:13 42:14 43:16 46:14 46:24 52:24 61:12 68:24 69:15,16 106:23 114:21 117:2 123:1 giant 116:22 give 11:18 15:14 24:18 49:21 50:22 51:16 52:8 71:7 71:11,19 80:7 81:21 89:25 92:1 99:24 100:19 106:17 124:20 given 28:6 35:5 65:11 72:8 76:9 116:21 gives 108:14,17 giving 108:7 glass 8:25 go 4:20 8:12 19:1 20:12 21:3,14 25:3 30:1 33:18 34:16 37:25 38:3 38:22 42:24 44:10 44:13 46:8 48:5 48:24 49:20 50:1 50:17 51:11 52:2 55:13 57:21 60:12 62:12,19 64:3,9 70:8 71:13 73:23 85:3 87:10 89:23 90:5,25 96:8 97:9 99:5 103:13 107:3 108:15 113:9 114:1,2 121:3 123:14 124:1 goal 30:22 44:6 87:23,25 92:2 101:5 goals 88:24 91:3 God 83:24 goes 19:11 29:20 67:3 75:12 80:13 80:17 97:7,17 going 4:17 6:10 7:8 19:20 20:7 23:11 28:25 29:4,21 30:4 32:7 35:13 37:21,23 38:2,22</p>	<p>41:1 42:5 43:4,7 44:14 47:19 48:9 51:15,24 52:2,12 52:13 54:6,9 55:3 55:4,9,12 57:23 59:25 60:14 61:21 62:12 63:8,9,18 63:23,25,25 64:4 64:5 68:11 78:1 78:10 79:2,7,22 81:1,9 85:8 86:2,3 86:4,6,9 88:21 89:8,23 90:8,10 90:24,25 91:1,5,9 91:19 92:19,20 93:24 96:17,20,23 98:4,7 106:5,6 109:1,20,21 111:5 112:2 113:10,18 114:1,2,4 117:9 118:22,23 124:23 good 4:3 5:20,21 10:19 13:12 42:13 45:11 49:6 56:5 56:20 61:12 67:2 71:11 78:8 82:14 92:14 93:13 95:14 95:17 96:23 100:15 110:3 114:11 118:11 Gordon 55:17 59:12 78:24 79:8 90:1 gotten 76:5 124:9 govern 110:8 governed 24:25 gradient 57:9 grand 89:18 granted 103:4 granular 117:13 gratitude 122:2 great 8:11 17:9 20:20 31:4 39:1 43:2 52:17 67:9 69:15,16 71:22 119:14 124:17 greater 67:5 112:4 ground 4:20 8:12 32:11 38:13 44:17 48:18 52:25 89:24 102:14 groundwater 58:2 59:24 group 12:11 62:3 70:21 82:13 92:22 92:24 98:2 112:10 113:16</p>
--	--	---	--	---

Hydropower Regulatory Efficiency Act of 2013 - March 30, 2017

groups 7:11	121:11,17 123:3,9	100:4,12 111:12	16:8 17:21 26:7	67:23 68:3,5
guarantee 33:9 80:2	123:19 124:2,13	114:22 115:24	35:17 37:3,4 49:9	82:14 83:20 84:22
80:3	124:17 125:14	helps 25:5 52:19	54:12,13 55:21	88:18 94:15
guess 16:22,25 17:3	happen 17:1 22:14	Heritage 13:1 45:18	56:2,15,16 57:9	100:13 101:7
29:8 32:2 41:5,24	36:23 49:16 89:24	47:23 51:20	57:11,14,15,17	115:2,18 122:3
43:23 44:1 49:19	99:20 100:6,15	Hi 8:1 12:18	58:13 67:21,25	impose 61:15 62:25
51:8 52:13 118:25	107:1 115:7	high 37:4 57:9	74:3 92:8 100:22	112:20
120:7 123:10	119:24	higher 48:14 62:15	102:22,23 111:3	imposed 63:3
guidance 53:21	happened 12:7	Hill 120:12	111:10 114:9,11	imposing 68:15
95:21 125:8	84:17 113:12	hindered 14:19 15:9	116:19,22,25	improve 6:10 95:15
guys 27:15	happening 24:14	historic 13:2,4,5	120:14 124:4	100:25 101:6
	52:11,16,18 88:3	17:5 19:24 34:22	126:6	improved 42:24
	101:5	51:22,25 64:17	hydroproject 84:14	improvement
H	happens 50:6	77:16,16		100:17
habitat 20:9 21:2,13	115:25 123:23	historical 96:15	I	inadequate 92:16
27:19	happy 30:13 110:7	hit 44:12	ICD 60:12	include 9:25 58:7,12
Hahn 2:12 8:10	113:12 124:2	hitting 48:18 88:19	idea 22:12 38:7	68:18
19:18 26:20 36:10	Harbors 56:9	holder 18:6	48:22 62:17 85:17	included 5:13 27:2
42:3 53:14 71:24	hard 6:24 16:10	holds 17:22	85:20 96:23 99:3	includes 80:8
82:3 96:3 108:25	38:16 41:16 53:9	holistically 67:20	106:4	including 33:13
123:8 124:16	82:14 90:13	Holtwood 101:2	ideal 79:16	53:5 69:21 70:12
half 25:2 45:11,17	103:15 110:3,16	home 89:21	ideas 42:13 78:9	84:12 95:24
47:6 63:16 80:23	hardest 84:2	homework 102:12	99:16	inconsistent 120:24
84:13 88:4 107:19	hats 39:15	honest 24:19 78:23	identified 90:7	incorporated 35:8
107:22,25	Hayes 2:8 12:8,8	82:17 84:18	identify 51:25 52:3	incorporating 69:11
halfway 78:7	15:11 21:18 28:10	honestly 80:13	103:8 114:2,2,7	incredibly 27:6
Hamilton 2:7 12:1,1	37:21 42:17 44:10	honor 5:22 112:25	114:10	30:22 122:3
14:22 18:22 24:19	48:5 49:23	Honorable 2:5 4:18	illustration 80:22	independent 115:5
29:6 40:21 42:13	headed 95:16	5:10,18,20	ILP 67:9 86:4 98:3	India 47:24 48:1
45:4,14	headquarters 56:6	Hoover 111:17	98:21,23 99:7	indicating 58:13
hand 11:17 22:23	heads 97:13	hope 5:8 10:25 53:2	101:16,20,21,24	indication 124:9
35:3 121:20	health 85:23	54:5 95:16,21	102:2,2 106:21	individual 15:13
handed 12:24	hear 5:8 8:9,25 9:2	hopefully 37:6 48:8	107:4	31:24 50:16,17
handholds 65:17	18:2 111:5,8	74:6 103:18	impact 16:4 20:7	60:15 71:12
handle 40:6,14 89:8	117:21	119:23	29:20 59:18,23,25	106:25
handled 19:9	heard 31:2 46:9	horror 106:18	61:1 63:12 64:11	individually 38:22
hands 62:11,21	88:11 93:25 97:1	horses 53:1	72:24	industry 47:20
hang 74:10,14	124:8	house 11:12 94:13	impacted 57:14	inform 94:5
hanging 6:6 104:22	hearing 5:9 7:3,5	Howell 45:19	impacts 16:9,14,15	information 20:21
Hansen 2:19 8:1,1	37:12 66:22 75:4	HPMP 16:22 49:18	32:22 60:3 61:3,6	21:2,13 26:23,25
54:9,11 57:18	89:1 122:2	huge 27:25 28:7	61:10 102:15	27:5,18 28:7
59:13 60:17 61:14	heartfelt 59:11	82:17 92:22	112:3	30:12 41:19 43:16
62:24 64:23 65:21	heaven 83:14	105:14	impeded 31:7	43:20 52:8 59:20
67:17 68:14 69:20	heightened 66:16	hurdle 15:2	impediment 75:13	59:22,26 60:16
71:4,21,25 73:1	held 10:4 126:20	hydraulic 33:11	98:5	63:7 64:1 65:16
74:17 76:13 77:21	Hello 12:8 47:17	hydro 18:25 27:12	impediments 79:17	65:17 69:3 72:8,9
79:11,13 81:22	help 7:12 24:3	32:19 37:2 38:9	implement 10:3,5	72:22 73:13 79:20
82:4 84:24 86:9	48:23 69:10 81:3	46:22 106:16,16	36:4,25 38:17	81:6 86:23,24
87:7 89:7,10 91:7	91:24 94:4 96:21	109:25 110:3,3,12	67:21 108:15	87:1 91:2 95:19
92:21 95:23 96:4	104:9 112:21	114:19 118:8	implemented 73:10	96:19,20 104:7
98:13 99:9,12	114:7 125:2	121:25,25 123:1	86:11 99:22	informative 4:16
101:13 102:19	helped 30:16,20	hydroelectric 5:2	implementing 5:6	94:1 125:2
104:16 106:9	helpful 27:6,17	hydropower 1:3 4:5	55:5 125:4	informed 118:14
108:20 109:1	30:22,25 33:7	4:8,12 6:1,7,14,19	implications 49:4	initial 10:2 60:9
110:22 112:24	49:22 73:20 84:21	7:15,20 8:2,4 9:17	important 5:23	94:4
113:20 114:24	91:2,3 94:8 95:20	9:22 10:21 12:21	36:18,25 62:12,13	initially 63:15
117:11 118:24				

initiation 63:21	investor 79:21	118:11 124:21	kinds 52:6,9	94:6 95:1,2,3,4,5
initiative 80:14	investor's 41:10	John 7:15 35:14	Kinloch 2:16 44:23	95:7,7,8,11,12,22
innovative 64:9	investors 13:25 35:2	joined 109:21	44:24,25 106:15	96:10 97:2,12
111:20	63:7 81:3,9 91:2	joining 124:18	106:15 121:23,24	99:1,16,24 100:4
input 10:3,10 125:2	92:12	joke 79:15	121:25 123:17,18	100:7,10,11,11,14
inputs 91:22	invite 94:5	Jones 3:1 56:12	123:20	100:20,22 101:9
inside 108:16	involve 98:18	71:6,6	kit 114:7	101:10 102:5,15
installed 11:13	involved 6:17 39:10	Joyce 46:16 48:7	Klein 2:22 56:5,6	102:22 103:4,11
instances 81:15	42:15 53:16 57:15	July 76:22 102:25	60:21,24 68:14,17	103:12 105:10
94:16,24	59:3 60:5 72:6,9	jurisdictions 32:21	70:25 76:13,15	108:18 110:7,15
instrument 53:6	77:1 80:8,23	70:12 85:4 92:16	86:13,14 102:20	111:23 114:18,25
integrate 107:3,7	96:13 119:2,10,11	110:10	102:21 114:24,25	115:8,10,11,14,21
integrated 93:9,15	121:2	justify 10:16	knew 24:1,14 30:21	115:24,25,25
99:15 106:19	involvement 64:21		90:7 91:15,18	116:12,15,16,18
107:8,8 122:9	120:8	K	105:15 109:24	116:22 117:16,23
integrity 29:21	involves 13:7	K-i-n-l-o-c-h 44:25	110:4	117:25 119:5,21
intelligent 106:2	issuance 75:18	Kamau 56:15 71:7	knock 8:25	119:25,25 120:1,3
intense 47:20 64:22	84:12	Katz 7:16	know 9:7 11:5 13:9	120:6,7,9,12,13
intensive 88:8	issuances 73:8	keep 32:3 66:24	16:3 17:6 20:11	120:17,18,19
intent 99:18	issue 20:4,6 23:14	90:16 91:3 97:12	21:8,9,10 24:10	121:3,4,7,13
intention 66:8	65:7,15 75:20,21	keeps 45:16	25:9,11,12,14	124:1
interact 62:14	76:3 78:11 80:20	Kentucky 5:1,3,4	27:12,19,20,22	knowing 88:20
interactions 14:18	81:17 82:8,11	10:7,23 11:8,9,15	28:2,5,19 30:5,14	114:4 116:23
interest 57:13 68:1	85:7,25 86:1	11:23 12:2,4,6,10	31:3,4,5,9 32:24	knowledge 48:15
88:13 89:12	92:11 94:10 100:9	12:15,19 13:1,11	33:6 34:7,9 35:23	known 16:22 20:9
118:15 121:19	issued 66:23 72:20	13:15 14:13,16	36:3,22 37:2	103:16
interested 29:17	76:22 94:25	15:12 17:22 18:4	39:19 40:10 41:5	knows 83:15
85:4,5 93:25	108:19 125:6	18:11 25:21 26:3	41:20,20,21 44:6	Koerner 2:21 55:19
interesting 75:24	issues 10:16 30:7	32:15 37:7 39:24	44:14,16 46:5	55:19 64:25 65:2
interests 6:13,16	38:12 40:22 41:1	39:25 40:19 45:6	48:11,16 49:18	72:4,5 84:24 85:2
74:2 87:20	47:9 48:12 68:10	45:16,18 46:2,4,7	50:14,20 51:23	98:13,16 101:16
interfere 72:17	74:14 77:17 78:2	46:12,14 48:6	52:1,11,14,14,16	106:18 113:20,21
interference 5:11	78:6 85:9 94:21	50:8,21 51:19	52:18,19 53:24	Koerner's 117:21
54:18	101:1,2 114:5,9	54:14 70:8 75:4	56:12,14 58:24	Kyle 3:1 56:12
interim 15:23 22:8	119:14 122:6,12	75:24 106:21	60:24,25 61:2,5	70:15,25 71:4,6
23:8 26:10 28:20	122:15,24	107:5	61:25 64:3 65:15	Kyle's 71:2
35:6,10 37:23	issuing 71:1	kept 27:7	65:19,25 66:9,20	
38:4,14 44:13	it'd 94:7 100:4	key 20:9 34:14	66:21 67:2,4,7,21	L
49:11 75:25 92:12	it'll 19:9,13	39:20 43:18 59:22	67:24 68:2,6,7,8	L-i-t-t-l-e 31:21
internal 13:22	items 64:1	59:22 63:20 117:9	68:11,17 69:7,13	laboratory 35:11
internally 82:15		keys 66:2	69:23 70:19 71:10	LaFleur 2:14 5:8
85:9	J	kill 90:12	71:11,13,13 73:5	36:13,14 37:13
interpret 98:5	Jankel 2:17 3:2	kind 12:13 15:2,19	73:5,6,7,10,11,11	82:5,6 83:25
introduce 4:19,23	47:17,17 121:16	16:3,24 17:3	73:12,21,23 74:2	84:23 109:7,10
7:24 8:6 11:19	121:18,18	18:23 20:24 22:25	74:3,4,5,6,7,9,10	lag 34:12
55:11,14	January 34:9 53:22	24:15 25:5,12,22	74:11,14 75:4,6	laid 47:9
introducing 7:13	75:15 125:6	28:25 35:25 37:21	76:1,2,6,25 77:9	land 16:13 20:10
introduction 66:11	Jennifer 2:10 12:25	40:22,24 41:10	77:10 79:22 80:5	55:24,25 56:1,4
inundation 98:6	16:18 19:21 23:17	42:13 43:24 44:3	82:20 83:21,21	65:4,6,7 72:16
invasive 30:3	27:4 39:21 43:22	44:10,15 48:5,25	84:1 86:14,15,17	Landing 106:16
invest 26:6 79:22	45:21 49:20 50:24	51:2 52:13 62:6	86:23 87:9,17,25	121:25
96:24 116:17	59:8 78:22	66:7,18 70:11,20	88:16,25 89:3,5	lands 72:14
investigate 9:21	Jill 45:19	70:22 71:7 76:8	91:20 92:14,18,22	landscape 34:5 95:7
investing 92:20	job 13:3 16:5 20:20	82:12 83:12 91:1	93:2,4,5,7,11,11	language 19:5
investment 77:4	79:1 83:9,13,19	92:11 99:14 100:5	93:14,15,17,19,20	29:25 66:11 74:10
80:1 96:22	84:19,19 95:14	110:13 114:3	93:22,25 94:4,4,5	large 21:24 29:14

Hydropower Regulatory Efficiency Act of 2013 - March 30, 2017

86:11 92:22,22 93:5 117:17 122:11 larger 85:3,6,22 86:2 118:1 largest 21:19 Larry 126:24 lastly 118:9,21 late 18:25 31:8 32:11 38:23 69:2 law 37:10 50:8 58:10 laws 69:7 77:18 78:9 110:8 113:13 lawyer 78:8 82:16 109:23,23 lawyers 79:12,14 lead 112:16 118:23 119:23 leadership 84:1 leading 7:1 leaf 112:14 learn 6:9 36:18 37:6 98:20 104:1 108:5 learned 7:6 97:21 110:7 learning 48:14 99:6 103:6 lease 18:19 19:4,9 19:14 29:25 53:6 leases 81:3 leasing 81:4 leave 113:17 124:11 left 24:15 32:11 45:20,25 49:18 50:1 legal 10:15 15:24 72:2 legislation 4:21 106:2 Lehigh 64:18 length 69:18 lengthy 34:25 Leoson 28:18 lessons 7:5 36:18 104:2 let's 58:21 75:14 83:6 107:13 108:19 letter 26:12 58:7,12 letters 71:2 85:12 103:12 105:22 letting 27:20 28:2 33:5 level 9:12 21:9 27:24 30:22 54:23	62:15,15 66:1 77:10,12 117:13 levels 21:24 leverage 32:24 liaison 40:11 liaisons 39:25 license 11:3,7 18:6 20:17,18 27:2 35:3,7 40:19 45:10 47:7,10,11 63:8 72:20 73:9 77:25 79:21 80:3 80:11 84:12 92:13 96:11,22 97:23 99:24 100:21 105:20,23 107:8 108:2,8,19 117:13 licensed 11:14 45:3 55:23 62:8 licensee 65:18 70:7 119:5,9 licensees 86:3 licenses 37:17 94:24 licensing 4:5,22 6:4 6:13 7:15,20,21 8:2,4 9:11,12,14 9:21 10:6,21 11:16 14:20 25:19 25:24 26:1,3,13 29:7,10 32:15 35:1,17,23 40:24 45:5,8 46:14 49:9 53:3,17 54:12,14 54:22 57:15 59:12 62:5 72:17,18,24 82:13 96:6,20 97:4,20 98:14,18 99:6,15 104:17 106:20 107:4,9,12 109:6,9 110:12 112:18 122:7,9 123:1 124:5 125:4 licensings 57:17 lifetime 43:4 likelihood 80:5 limitations 37:16 41:4,24 limited 85:21,24 limiting 100:12 limits 61:15 62:25 63:3 68:16 line 46:20 53:1,2,9 108:7,7,10,13 lines 24:11 51:24 52:1 list 34:13 57:22	60:25 75:14 92:9 listed 13:4,18 16:6,9 16:12 17:7 20:7 34:20 43:11,12 51:15,25 52:7 58:4 59:24 98:22 Listen 84:7 listened 106:18 listening 8:15 110:14 113:1 lists 113:23 literally 52:10 little 2:15,23 5:7 16:24 28:16 30:1 30:3 31:20,21 39:16 40:14 48:8 48:14 49:25 51:2 51:17 55:3 56:20 56:21 58:1 59:23 65:21,23 66:3 68:12 74:17,19 82:7 84:3,15,16 84:16 87:8,9 91:9 91:10 93:23 98:10 101:13,15 102:21 106:19 110:15 117:11,12 living 37:10 load 75:2 79:24 113:8 loading 67:10,14 101:22 loads 80:14 local 58:10 62:15 64:21 79:10 located 5:3 8:18 11:23 58:5 locations 13:11 19:7 lock 5:2 10:7,23 11:8,12,16,23 12:7 13:11 14:13 14:17 19:2,11 24:11,14 26:3 29:15,16,21 30:4 30:5 38:8 45:5,6,7 47:4,5,5 54:14 70:8 locks 12:6 19:8 log 66:24 long 7:4 40:15 41:11,12 43:12 46:10 94:19 98:7 102:10,24 107:2,9 122:5 longer 30:2 longest 21:19 22:15	longstanding 36:16 look 7:5 13:22 16:3 16:5 24:1 37:11 44:15 47:20,24 63:4,5 74:21 81:22 87:13 108:16 looked 38:6 66:2 looking 6:22 7:3 14:12 29:11 56:19 57:5 61:1 73:9 74:13 95:5,18 100:3,11,21 103:19,22 112:6 114:13 122:3 123:22,23,23 looks 118:23 loop 4:6 6:5 9:22 55:17 58:15,25 82:24 111:4 lost 69:2 101:6 103:11,11 115:20 lot 16:14,16,17 18:24 23:21 24:6 24:15,20 26:14 27:12 28:4,5 29:1 29:9,23,24 30:16 35:2 36:23 39:3 39:15,25 43:4 45:13 48:10 65:13 68:24 72:7 76:15 77:8 78:11 81:13 84:1,22 85:7 98:13 100:25 101:18 103:6 104:1 110:7 113:21 114:17 115:11 122:8,11 122:20 lots 62:16 97:16 low 6:6 61:1 104:22 lunch 54:4	113:23 117:6 manage 62:16 management 72:16 105:15 manager 55:20 56:7 102:11 113:3,7 managing 58:12 62:13 69:7 mandated 6:8 mandatory 119:18 March 1:11 34:11 126:19 mark 61:25 77:12 market 14:3 118:1 Massachusetts 81:2 material 117:3 materials 15:22 matter 68:3 87:12 102:25 126:5 McNamara 2:3 8:3 8:3 10:19,20 13:6 14:15 15:6 16:1 16:18 17:9,24 18:3,9,20 19:15 19:19 21:16 23:16 24:17 25:6 26:16 26:21 27:9 28:9 29:5 30:8 31:16 32:5 33:5,16,22 34:15 35:13 36:6 36:11 37:13 38:18 39:21 40:18 41:3 41:22 42:4,12,16 42:25 43:22 44:8 44:18 47:13 48:3 48:24 49:19 50:24 51:18 52:21 53:11 53:15 mean 35:25 46:13 67:20,25 68:10 73:25 77:6,19 84:11 88:10 93:5 93:13,20 109:3,23 120:20 meaningful 66:6 means 9:1 61:6 80:9 meant 41:16 82:7 measure 42:8,11 45:2 51:13 measures 39:6,13 43:19 105:19 measuring 44:25 medium 60:2 meet 24:3 27:8 28:1 30:17 41:16 46:17 46:19 53:4 87:22
--	---	---	--	---

<p>113:10 meeting 5:13 28:23 28:23 31:25 33:1 44:6 46:14,18,25 106:23,24 125:11 125:16 meetings 21:21 84:13 106:25 meets 29:8 megawatt 111:11 111:14,14,15 112:4 megawatts 11:14 112:1,11 117:19 member 12:5 24:25 42:5 54:13 members 7:13 44:20 69:21 memorandum 47:7 107:24 memorialization 74:21 memory 33:10 mental 66:24 mentality 97:17 mention 24:23 29:8 64:22 102:6 109:20 123:25 mentioned 11:22 13:13 18:12,14 45:4 49:9,14 66:19 67:15 73:22 92:6 107:16 mentor 95:4 mentorship 95:8 merits 9:15 55:2 mess 78:14 met 7:25 22:9,21 61:5 microphone 8:16,18 8:21 9:2 17:16,24 31:18 44:22 70:1 70:4 79:13 99:12 109:19 middle 34:2 midpoint 80:1 midterm 80:3 mike 71:5 mikes 54:6 Miles 94:12 mind 33:5 57:23 58:19 66:10 70:2 109:21 121:14 124:19 mines 46:22 minimal 36:1</p>	<p>minimization 39:6 39:13 43:19 51:13 minimum 119:13 minor 46:23 61:7 minute 5:14 minutes 53:25 missed 36:15 mitigate 103:18 mitigation 105:19 Mitigative 66:10 moderating 10:24 modification 100:20 modifications 19:25 23:12 38:10,14 50:7 modified 62:6 77:17 modify 97:3 moment 124:20 moments 44:20 Mona 2:21 55:19 money 47:25 80:9 96:24 monopolizing 34:17 Montana 55:18 month 46:6 months 12:23 28:19 47:23 48:7 90:2 morning 36:17 MOU 74:5 76:21 87:25 102:24 MOU's 76:24 mountain 46:19 MOUs 119:20 120:4 move 20:14 21:9 30:16 34:10 36:6 36:11 57:18 71:25 73:17 77:6 86:9 86:23 94:24 96:5 104:15 moved 113:14 moving 23:5 48:25 90:17 multi 93:11 multiple 37:18 38:17 40:22 41:1 75:7 85:4,4 86:11 86:20 89:8 90:10 93:6,7,17,20 120:22 municipalities 81:13 mushed 103:14 mussel 21:23 muster 60:14 mystery 105:24</p>	<p style="text-align: center;">N</p> <hr/> <p>N 4:1 nagging 93:21 name 4:9 7:25 8:19 8:23,23 17:16,18 17:19 31:19,20 44:22,23,24 47:15 47:16,17 54:10 55:19 56:21 70:1 70:2,5,6 106:12 106:13 121:14 126:6 nation 40:2 nation's 110:8 national 5:7 13:5 19:24 47:23 49:4 51:22 55:21,24,25 56:4 64:19 65:3,6 72:14 110:8 114:9 nationally 57:12 natural 91:17 110:9 naturally 58:17 nature 88:5,23 117:20 navigate 78:20 navigated 78:17 navigation 29:16 67:22 NE 1:8 near 5:24 necessarily 88:5,16 116:25 necessary 10:14 18:6 90:16 119:4 119:12,15 need 8:23 17:4 24:16 34:1,3 35:24 49:12 53:4 53:6,6,7,8,19 56:17 59:6 60:1 61:20 63:7,12,12 64:2 66:4 71:4 72:11,22 73:4 78:17 79:19 80:7 80:7 85:18 86:23 90:24 91:9,25 92:12 99:4 100:6 104:5 106:13 114:22 115:10 116:9 118:7 122:17,17 needed 23:2 28:23 28:24 29:3 31:6 41:18,20,20 49:25 69:18 89:17 102:1 needs 41:19 49:16</p>	<p>49:17 65:19 69:3 69:4 76:8 78:5 91:4 107:3 116:3 116:4,11 negatively 6:16 negotiate 53:6 negotiated 88:8 105:19 NEPA 36:2 72:19 81:20 88:2 90:9 91:14 93:14 102:8 104:5,24 105:2,9 105:13 112:15,19 never 22:25 28:14 48:17 106:21 107:1,1,4 new 10:13 11:11 17:20 18:23 24:21 24:22 25:3 32:19 56:23,25 57:4 64:15 67:11 80:24 96:7 102:8 103:1 106:1 109:23,23 109:24 113:10,13 114:11,19 121:19 123:1 NGO 68:1 121:9,22 nicely 102:2 niche 116:24 NOI 80:16 noise 8:22 non-codified 113:2 noncontroversial 99:19 nonfederal 120:14 nonlegal 113:2 nonpower 4:6 9:22 112:10 nonpowered 6:5 32:20 64:15 112:6 112:8 noon 5:24 normal 15:18,19 23:13 38:9 normally 21:18,22 48:7 Northeast 117:23 northern 43:12 northwest 54:11 57:8 note 4:11 94:15 notice 15:15 23:13 50:4,8,18 53:23 58:20 75:15 99:18 99:18 115:21 125:6,9</p>	<p>notion 81:20 96:13 number 4:7 5:2,3 7:10 10:7 11:9,24 12:7 13:10,14,15 13:18 14:7 19:2 26:1,11 30:24 37:3,9 40:6,16 45:24 55:25 70:12 70:12 72:5 85:12 85:13,22 91:22 98:22 104:6 114:6 numbers 92:23 123:13 nut 120:9</p> <hr/> <p style="text-align: center;">O</p> <hr/> <p>O 4:1 O'Keefe 2:24 57:7,7 67:17,19 73:1,2 74:20 92:6,21,25 99:9,11,13 118:24 118:25 obstacle 75:19 obvious 59:17 obviously 23:7 40:7 77:4,6,10 104:19 116:8 occasions 101:19 occur 11:1 occurred 103:7 occurs 116:5 October 10:4 OEA 109:13 OEP 109:13 offer 102:4 offered 59:10 offers 100:24 offhand 33:15 office 4:10 7:14,16 7:18,19 12:19 13:2 38:21 39:14 39:15,22,24 55:21 56:22 94:13 offices 38:20 86:19 Official 126:1,25 offline 59:9 offshore 91:12 OGC 109:13 oh 39:2 70:3 81:14 82:4 okay 17:15 19:19 20:3 23:16 26:21 33:18,18 34:16 37:14 44:9,18 46:1 49:7,8,19,23 50:24 71:20,22</p>
---	---	--	--	---

Hydropower Regulatory Efficiency Act of 2013 - March 30, 2017

89:15 90:23 93:21 99:13 107:15,19 107:20 108:21 109:10 119:7 old 59:21 110:15 once 28:17 35:11 39:2 89:8 92:23 one's 120:6 ones 63:1 68:16 73:9 122:18,23,24 122:24 ongoing 117:25 open 17:9 26:16 69:20 110:20 118:19 123:12 opening 4:18 5:18 operate 74:7 operated 12:5 19:13 operates 12:6 operating 61:5 operation 29:18 operator 8:8 9:6 opinion 6:6 76:17 opportunities 67:20 75:11 95:6,15 97:8 99:15,21,23 100:17 101:3,6 118:12 120:11 opportunity 73:16 73:18 74:7 75:1,9 99:17 100:1,25 117:10 118:22 120:5 optional 117:15 options 28:5 order 35:23 38:1 41:17 63:6 65:16 65:19 76:11,23 77:3 79:17,24 80:25 89:18 97:25 103:8 104:14 116:21 orders 73:9 100:21 ordinarily 66:8 98:2 organically 82:15 organizations 57:13 organized 86:18 89:4 original 11:4,8 13:19 14:6 60:17 69:23 126:20 originally 30:3 originates 56:3 other's 104:7 other's 103:8 outcome 42:22 44:1	outcomes 10:12 11:2 outdoor 10:20 outlet 100:24 outline 76:22 outlined 22:10 68:5 outlines 23:4 outreach 52:17 outset 118:20 outside 5:16 15:20 97:1 105:11 overall 16:4 62:8 89:18 overarching 38:7 overcome 81:4 overseeing 14:17 oversight 12:14,17 overview 9:17 overworked 46:13 46:15 47:1 92:17 106:23 owned 19:12,13 80:24 81:11 owner 12:3 14:10 14:16 15:3 18:12 29:12 40:25 58:7 owners 70:16 ownership 19:1 60:5 owns 12:5 17:22 <hr/> P <hr/> P 4:1 p.m 1:12 125:16 paces 83:4 package 22:3 88:5 PAD 60:12 84:12 paddlers 57:10 page 27:7 68:3 panel 2:2,18 4:24,24 5:5,15 7:12 8:7 10:25,25 36:11 37:14 42:6 49:2,4 53:20 54:10,21 57:20 64:24 69:21 69:25 89:20 95:24 96:12 106:10 110:25 121:13,21 122:1 123:13,14 124:18 panelists 4:23 8:6 11:18 13:6 15:7 26:22 30:15 34:15 44:8 49:6 53:16 53:25 54:1,3 55:7 124:18	panels 109:7 124:9 parallel 74:8 77:7 115:6 119:24 park 58:9 part 6:1 12:11,13 12:17 15:4 18:15 18:18 30:17 31:5 42:7 84:6 91:4 110:11 111:1 120:8 partially 32:8 participants 4:15 11:15 96:2 108:24 118:14,19 123:7 participate 92:24 participated 109:15 participating 125:1 participation 70:14 103:13 particular 12:17 22:5 31:6,24 65:4 81:24 114:14 particularly 64:1 101:21 112:6 119:18 particulars 113:9 parties 72:9 85:4,5 114:14 partisan 64:8 parts 13:17 31:9,12 partway 102:7 pass 60:14 passage 101:2 path 102:7,8 pathway 102:15 Paul 2:17 3:2 47:17 121:18 pay 78:21 pays 115:16 pejorative 88:10 pending 9:15 55:2 55:25 people 23:21 28:12 46:5,8 47:21,25 48:14 63:21 64:3 66:24 67:16 78:25 80:7 82:20,20 86:20 97:6,16 103:4 109:16,18 110:2,18 people's 97:13 perceived 6:15 percent 49:23 56:3 79:9 perfect 45:1,7 47:2 123:25	performance 112:5 performed 75:6 period 9:24 31:22 44:19 76:4 78:4 periods 9:5 permit 45:10 121:6 permits 13:10,14,15 53:5 56:1 120:20 permitting 12:12 53:4 56:12 92:17 98:9 person 45:19,23 46:6,16 71:17 86:21 103:15 113:3 personal 93:1 personally 57:15,16 personnel 9:1 perspective 41:14 41:18,19,21 61:4 66:5 73:18 74:3 93:2 100:16 101:4 113:12 117:5 121:8,9 phase 15:18 87:24 88:2 94:4 121:7 phases 88:1 philosophy 62:4 95:8,13 phone 2:12 4:15 8:8 8:15 9:4 19:17 26:19 27:19 28:18 28:20 36:9 42:2 53:13 71:23 82:1 96:2 108:24 123:7 123:13 124:15 phones 5:10 8:13 54:17 physical 103:15 picking 93:1,3 picks 94:20 piece 81:17 92:5 109:25 pilot 4:5 5:1 6:8 7:21 9:11 10:5,6 10:12 11:2,6 13:8 13:19 14:6 15:10 18:13 19:7 20:1,5 26:8 32:17 35:8 36:19 37:8,19 38:24 53:19 54:22 57:25 58:20,25 59:4 62:20 63:15 63:17 65:3 68:12 70:8,14,23 84:10 97:1 109:14	123:24 125:3 pilots 124:7 place 43:20,21 46:12 57:22 102:2 114:11 126:18 places 21:3 51:23 plan 5:14 30:19 58:8 101:11 119:14 planner 10:20 planning 41:9,17 91:2 plans 22:4 30:2 50:9 50:23 120:25 plant 19:2,12 20:9 20:13,23 29:18 34:2 plants 16:13 21:4,6 21:8 34:3,11 please 5:10 8:13,16 8:17,20 9:2,6,14 17:15 31:18 44:21 47:14 54:17,19 55:1 69:25 71:4 79:13 106:11 117:11 123:19 pleased 95:12 plenty 29:6 plug 102:8 plus 118:3 point 6:24 8:25 19:2 25:3 41:10 47:24 52:4,9 56:7 60:11 60:22 80:6 87:7 90:1 94:10 97:19 99:14 100:13 113:3 pointing 60:20 points 32:3 policies 10:13 118:3 policy 17:20 72:16 ponds 46:21 pool 29:14 portfolio 11:25 14:13 70:14 portfolios 118:3 portions 16:21 20:16 posed 37:22 57:19 position 33:3 95:4 positive 65:14 95:22 119:23 positively 6:15 possibility 40:12 possible 22:10 29:1 57:21 59:7 62:9
--	---	--	---	--

<p>84:6 104:7 106:8 possibility 40:14 possibly 38:8,11 48:22 113:15 post 9:25 29:9 35:1 85:15 96:20 97:4 108:14,17 112:18 potential 16:13,13 20:8,9 24:10 37:4 120:10,12 potentially 14:8 32:21 93:15,17 97:17 pounding 97:13 power 11:7,12 19:12 36:20 98:19 101:9 110:7 111:22 Powerpoint 17:12 practicability 5:6 55:4 125:4 practicable 10:15 58:21 59:15 60:22 72:3 76:18 77:20 77:23 80:22 81:19 81:25 86:16 practical 75:1 84:20 87:12 practicality 75:12 practically 87:12 practices 20:1 26:18 73:3,19 92:6,8,11 pre 87:23 97:3 108:14,14 112:17 pre-directed 106:3 pre-filing 26:24 30:12 pre-licensing 35:1 87:24 pre-negotiated 106:3 pre-planning 106:3 pre-scoping 114:3 pre-work 72:7 preapplication 21:21 27:1 99:18 precluded 31:13 32:12 preconstruction 96:21 predictability 89:22 prefiling 9:25 31:17 60:9 preliminary 13:10 21:13 45:10 56:1 120:20 121:6</p>	<p>premature 93:23 preparation 100:1 preparing 7:2 presence 20:8 33:13 33:25 34:8,10,13 present 20:13 34:7 presentations 45:15 presented 66:1 presently 37:4 presents 75:1,19 preservation 13:2,5 19:25 34:22 96:15 president 55:15 presume 32:7 pretty 28:22 39:10 39:14,23 40:1,9 50:12 previous 87:6 previously 51:6 primarily 12:20 29:11,17 primary 31:14 35:19 primer 9:16 principal 65:24 prior 8:24 14:24 50:12 54:20 75:17 priorities 85:22 prioritized 87:21 prioritizing 40:7 priority 85:23,24 86:5 Prisoner 59:22 private 26:5,6 79:25 80:12 96:22 112:23 privately 59:5 81:11 privilege 68:4 probable 20:22 probably 12:23 22:15 23:11 27:10 30:1 56:18 61:6 61:12 67:15 71:8 75:16 85:13 86:21 122:21 problem 46:13,24 62:19 76:1 77:25 78:19,25 81:10,11 82:11,18 83:11,14 88:7,13 97:14,15 112:9,10 116:17 122:6 problematic 70:17 70:18 problems 81:12 108:1 122:10</p>	<p>proceed 14:1 proceeding 8:15 120:2 125:12 126:3,6 proceedings 92:9 119:3,24 126:23 process 4:5,22 5:1,6 6:4,10,13,17,18 7:7,21 9:11,13,21 10:3,5,6,11,14,14 10:15 11:2,16 12:12,23 13:9,12 13:19,19,21 14:14 15:5,10,12,18 16:11 18:14,16 20:2,5 21:17 23:5 23:25 24:24 25:4 25:15,19,21,25 26:3,9,12 27:21 28:11 29:7,24 30:7,19 31:5,18 32:17 35:7,9,23 36:19 37:8,17 38:11 39:11 40:25 41:8,10,11,12,13 41:14,25 42:8 43:3,5,10,13 44:5 45:9 46:11 47:3 48:22 49:5 52:4 54:23 55:1,5 57:21 58:6,12 59:3,9,19 60:4,18 62:5,7 63:13 64:5 64:10 65:11 66:21 67:8,23,25 68:4,8 68:19,25 69:1,6 69:17 70:8,14,24 71:13 72:2 73:7 74:15,23 75:9 76:16,17,18 77:23 78:7,14 79:4,7,10 80:14 81:14,25 84:10 86:4,6,10 86:15 88:2,8 89:8 89:16,22 90:16,20 91:1,24 92:13 93:18 94:18,23 95:19 96:12 97:1 98:3,18,20,22 99:15 101:8,25,25 102:5,9,10,13 103:2,8,18,24 104:15,17 105:4 105:23,25 106:3 106:20 107:2,4,8 107:9,12,14,17,25</p>	<p>108:6,6,11 109:6 109:9 112:3,4,12 112:17 113:6,8 115:5,6,10 116:3 116:10 117:15 118:16,17 120:21 121:3 122:7,9,17 122:22 123:21,22 124:5 125:4,5 processed 84:16 processes 9:14 24:20 26:2,4,4,8 26:18 34:25 38:1 45:8 67:12 74:7 76:23 77:7 81:5 92:23 96:6 97:3 99:6 102:6 103:1 103:5 104:4 processing 11:4 41:24,25 96:8 108:4 product 59:11 productive 67:1 118:16 productivity 82:13 program 19:7 38:24 55:20 56:7,16 59:4 61:12 63:15 68:12,21 69:12,13 71:1,2 79:4 87:4 114:10 programmatic 5:7 9:11 36:4 54:23 55:5 81:20 91:14 125:5 programs 41:2 123:24 progress 117:7 project 5:2,2 7:20 10:7,12,24 11:8 11:10,14,16,18,22 12:15,22 13:8,20 14:20,25 15:8 16:3,4,8,11,15,24 17:23 20:7,10,16 23:15 27:12,15 28:12 32:16 33:7 35:8 38:13,23 39:3 40:13 44:2 45:1,3,23 46:10 48:18,21 49:16,21 50:4,9,23 51:4,7 52:25 53:9,17,19 54:15 55:17,18 57:24,25 58:1,3,5 58:9,16,16 61:1</p>	<p>62:1 63:14,15,17 65:3,4 68:11 69:14 70:7,11 71:14,14 77:10,13 78:17 83:1,4,15 84:10 86:21 90:4 92:23 93:11,13,22 94:3,17,23 99:20 101:2 102:10 107:22 108:8,18 110:1 111:14,14 111:15 112:4 113:3,7,9,14,16 117:16,17 121:4 123:25 124:10 project's 13:24 16:7 16:21 101:4 112:2 projects 4:5,6,10 6:4,14 7:15,17,18 7:19 9:14,23 10:5 11:4,6,24,25 12:13 13:3,10,16 13:23,25 14:7,12 15:14 21:18,19 26:2 32:16,19,20 37:9,18,19 38:6,9 38:17 39:14 40:1 40:8,17,19,22,24 41:5 45:5 46:9 47:6 50:17 55:1 55:23,24 57:20,21 58:20 64:18,19 67:24 70:12,13 71:13 72:13 76:25 77:1 78:16 85:13 86:12,20 89:8 93:3,6,7,13,16,17 93:20 94:13 99:19 99:25 100:22 107:17 109:13 111:4,18 112:1 113:23,24 114:19 120:18,22,24 122:11,14,15,15 122:18,23 123:23 promotion 118:7 proof 65:15 proof's 104:10 propensity 67:6 properly 36:25 property 17:23 18:5 18:7,18 19:10,10 60:4 80:25 81:8 81:17 proponent 92:10 proposal 11:6,10</p>
--	---	--	---	--

Hydropower Regulatory Efficiency Act of 2013 - March 30, 2017

<p>proposed 11:13,22 11:25 14:14 51:21 58:5 87:13 117:16 prospective 79:20 Protection 12:11 47:22 protective 83:9 proud 79:8 provide 4:21 25:20 33:3 47:14 53:19 65:18 71:9 80:10 95:7 112:22 provided 26:12,23 27:1 47:7 53:22 66:14 72:7,23 119:17 125:8 provider 121:19 provides 74:7 providing 70:20 86:25 95:20 proving 109:4 provision 75:19 prudent 69:10 public 4:4 10:13 15:14 23:13 50:4 50:8,18 58:9 59:3 81:5,7 85:23 105:4 106:24 115:21 116:6 pudding 104:10 pulled 24:2 pulling 35:1 pump 4:6 9:23 55:17 58:15,25 82:24 111:4 purpose 35:19 112:17 purposes 37:1 77:13 117:1,1 pursue 90:6 pursuing 41:24,25 purview 111:24 120:7 push 16:23 17:4 98:25 pushing 90:13 put 14:11 29:25 31:25 39:5 43:19 46:20 61:22,23 74:23 76:9 78:18 83:4 95:20 107:7 108:6 109:12 119:22 121:19 122:8 puts 34:12 putting 46:22</p>	<p>Q</p>	<p>108:2 122:18,19 quite 21:20,24 22:9 49:14 112:21 113:25 quote 59:21 94:11</p> <hr/> <p style="text-align: center;">R</p> <hr/> <p>R 4:1 Rachel 2:3 8:3 10:19 11:21 23:23 28:21 33:20 52:17 109:10 radar 97:10 raise 82:10 raises 94:20 Ramya 2:6 11:19,20 13:7,9 18:9 25:6 30:8 32:5 33:5 41:3 42:6 47:24 49:20 52:21 70:6 range 19:3 88:23 93:16 rapid 114:7 rapport 94:21 re-codifying 102:1 re-do 106:13 re-initiate 51:6 re-initiation 51:4 re-licensing 57:4 reach 44:5 56:17 94:6 115:18 reached 23:23 reaching 115:23 read 57:24 ready 4:2 60:11 78:3 89:16 101:21 124:1 real 31:10 39:20 42:13 43:21 57:23 69:18 78:23 79:25 80:20 81:10 82:17 83:24 84:18 108:2 108:13 122:25,25 realistic 37:8 realities 89:24 realize 40:15 57:22 68:22 really 6:9 13:21 14:13 16:10 20:3 20:21 23:10 24:19 24:21 25:19 26:15 29:23 32:10 37:1 37:6 39:4 41:8,21 43:19 50:6 51:9 51:12 52:19,19,25 59:25 60:13 61:2</p>	<p>61:9 62:3,10 64:6 66:6 69:2,17 71:2 71:17 73:11,19 76:17 78:10 82:23 84:21 85:18 86:6 89:21 93:8,25 94:7 95:20 97:13 97:16 99:4 100:13 101:7 103:7,24 104:11,21 115:3 116:10,15 117:1 117:10 118:11,18 120:7 122:7 realm 92:19 reason 75:10 108:15 112:7 122:4 reasonable 36:1 37:9 58:21,24 59:15 60:22 114:12 reasonableness 64:24 reasons 34:20 59:1 reassurance 35:2 112:22 received 10:13 11:6 125:2 recognize 6:12 36:12 recognizing 86:24 recommend 91:10 recommendation 69:11 recommendations 11:3 20:12 124:6 recommended 30:12 56:18 record 71:9 110:20 recording 5:21 8:14 recreation 10:20,22 58:9 recreational 29:16 red 17:3 reduce 8:22 104:8 reduced 60:7 reducing 6:19 reeducate 46:9 reference 55:16 referenced 33:13 refined 60:6 111:25 reflect 122:1 reflected 95:8 reform 57:11 74:4 refuge 58:10 regard 25:5 114:4 119:6</p>	<p>regarding 4:25 14:18 26:17 41:23 44:21 49:11 56:13 61:6 71:8 103:24 117:2 regardless 88:22 regime 59:12 regimes 53:5 Register 51:22 regs 124:11 regular 43:5 85:15 86:3 regularized 35:7,9 regulate 120:14 regulation 99:2 105:21 regulations 10:13 15:12,21 23:2 50:4 69:7 78:9,12 82:21,23 98:8 99:1 104:13 111:24 112:14,15 113:18 regulator 78:20 82:19 83:8 90:23 regulators 83:5,7,12 83:16,23 86:19 107:6 116:24 regulatory 1:1,3,7 4:8 6:2 9:17 12:12 15:9 26:4 56:7,8 57:1 61:2 68:21 69:1,12 71:1 72:2 73:17 75:19 76:10 77:1 82:21 87:4 94:18,23 102:23 111:10 115:2 126:4,6,22 reintroduce 54:10 reiterate 54:20 118:9 rejected 116:3 rejects 116:8 related 17:11 relationship 78:23 82:18 84:18 113:16 relationships 62:16 relative 32:16 relatively 61:7 73:10 119:25 reliable 37:5 reluctant 44:4 rely 104:7 remain 76:25 remaining 50:25</p>
--	-----------------	--	--	---

remains 36:5	resistance 115:13	reviewing 13:3	run 11:10 25:17	schedules 22:4,14
remark 109:2	resisted 62:23	16:20 31:12 73:7	59:2 91:1 104:25	scheduling 85:20
remarks 4:18 5:19	resolve 122:8	86:20	104:25	89:22
remember 17:15	resolved 91:4	revised 76:21	run-of-river 46:23	scheme 89:18
33:8,15 54:19	resolves 16:23	102:24 103:17	running 21:19	science 43:18
94:11 106:11	resource 25:10	revisit 91:25	48:18 54:4 68:9	scope 26:11 30:24
110:14 113:22	31:11 33:11 37:5	revisited 58:18	112:9	99:20,25 105:2
remind 9:9 54:16	61:3 68:9 87:8	revoke 22:21	Ryall 2:10 12:25,25	112:23
reminder 44:21	91:17 100:18	rid 82:22	16:19 23:19 27:5	scoped 105:6
53:17	101:6 119:4,8,16	ridiculous 111:23	39:22 43:23 51:19	scoping 90:10 99:19
reminders 5:9	119:17 121:9	right 4:2 8:11 16:23	Ryan 2:19 8:1 54:11	104:24 105:9,10
removal 46:19 99:2	122:19	17:6,12 23:22	77:24 109:10	105:13,13
renewable 118:2,3	resources 10:23	30:4 40:16,25	110:21 124:25	Scotland 47:18,21
repairing 98:1	13:4 17:8 51:26	41:12 48:6 53:3	Rye 11:7,21 13:10	Scottish 47:21,22
repeat 63:11	81:16 91:25 92:17	54:9 78:23 80:23	14:18,24 15:21	scratch 46:8 48:21
report 7:22 10:11	110:9	81:25 82:4,25	17:21 18:4 19:13	screw 64:13
10:17 35:20 61:20	respect 31:21	83:14,17 89:19,21	20:15 21:3,9,21	season 34:21 72:6
79:3 90:19 91:10	101:16 118:2	90:7,17 93:1,3	22:9,23 23:1,4,14	104:25
124:6	120:10,17,21	96:5 98:3 103:15	27:16,22 28:18,23	seasons 72:11
reporter 8:14 17:17	respectfully 59:1	109:1,18 113:5	37:7 38:4,13	seats 109:17
31:19 47:16 70:3	respectively 63:17	120:2 123:4	43:10 44:16 47:4	second 2:18 5:5
125:10 126:1,25	respond 35:15	125:13	70:7 85:12	16:20 45:13 49:3
reporting 100:5	responding 39:16	rights 17:23 18:5,7	Rye's 13:7	53:20 54:1,10
reports 27:2 105:18	response 11:5 24:4	18:18 60:4 80:25		72:1 75:11 83:7
repower 74:3	24:5,12 30:18	81:8,17 90:6	S	87:10,11 92:5
represent 92:21	33:21 47:14 52:23	ring 89:21	S 4:1	101:15 105:17
representatives	82:23	risk 34:17 59:3	S-w-a-m-i-n-a-t-h...	119:20 124:18
7:10 19:21	responses 23:20	66:16 69:5 83:8	70:6	secondly 29:19 97:5
request 11:5 58:6	24:7 25:7	96:13 97:12 105:1	Sadiki 56:15	section 4:7,13 9:18
58:11,11 60:19	responsibilities 27:4	105:15	safety 63:22 85:23	9:20 12:9 13:5
98:2 116:1,1	responsibility 62:19	risks 59:6 68:20	Salazar 7:18	16:20 19:23,24
requested 30:11	107:20 108:1	river 5:2,3 10:7,23	Sarah 7:18 27:16,20	21:17 23:17,24
112:20 115:19	responsible 13:24	11:8,10 12:2,6	sat 103:7	44:5 49:14 50:25
119:4	62:18 77:18	13:11,15 18:4,11	satisfactory 44:1	51:20,24 56:8,9
requesting 103:13	responsive 38:25	40:19 45:6,16	satisfied 84:17 86:4	56:11
requests 31:9	80:18	54:14 93:12 110:1	satisfy 14:9 15:24	sections 9:20
115:20	responsiveness	rivers 56:9 57:9,14	18:7 25:23 111:17	sector 6:7
require 72:13,14	27:24	road 16:24 17:2,4	satisfying 111:17	secure 18:6
81:1 113:4 120:8	rest 11:1 29:20	29:8 78:6,15	saved 105:25	secured 97:25
required 4:7,13	64:23 80:13	roadblocks 74:17	saver 105:14	securing 73:23
10:1 51:25 57:24	restate 18:3	74:19	saw 23:24 24:1	security 83:9
75:10,20 116:7	restated 59:17	role 29:7 30:6	101:2	103:13
119:7,8	restating 121:14	rolling 93:19	saying 22:19 30:14	see 17:12 19:16
requirement 14:9	restoring 57:14	rolls 43:6	47:8 50:5 67:4	20:13 21:11 23:7
70:16	restrictions 33:24	room 5:13,17 8:18	82:16 84:3 88:12	26:18 33:4,17
requirements 10:1	result 98:7 100:23	9:1 67:8 125:10	90:13,22 101:16	38:5,10,12,14,16
15:24 18:8 19:22	retiring 56:16	Roughly 59:17	90:13,22 101:16	39:13 40:13 41:1
25:24 31:6 73:6	retrofit 100:22	round 124:20	says 46:17 108:18	47:3 48:19 53:12
73:23 76:10 77:5	return 14:1	route 38:15 50:18	scale 5:7 36:4 55:5	54:5 65:5 68:20
81:8 97:4 103:3	review 13:1 16:24	51:23 63:18	85:3,6 86:2,11	68:23 69:4 71:19
111:13 116:19	24:16 30:2 52:11	rubber 29:8	93:5 125:5	72:24 74:18,19
requires 9:18,20	61:11 68:23 77:14	rule 40:25 96:19	scenarios 22:12	78:7 79:21 81:14
83:8 100:9	81:20 83:4 86:24	98:19	schedule 20:2 26:10	82:6 87:5 95:6,21
rerouted 85:16,17	91:24 94:23 95:2	rules 4:20 8:12	33:1 50:10 88:4	96:1 99:21 107:10
reservoir 11:11	97:24 102:9,13,16	78:12 98:12	109:8 112:19	114:17 122:10
resist 62:22	112:17	104:12	scheduled 53:24	seeing 25:17 42:1
			87:20	

Hydropower Regulatory Efficiency Act of 2013 - March 30, 2017

<p>48:10 82:1 103:19 seek 65:11 seen 23:6 28:14 36:5 40:18 44:15 95:11,12 select 13:20 14:1 selected 88:15 selecting 13:8 selection 15:8 16:2 selective 112:3 Senate 36:22 send 32:5 110:20 senior 7:14 sense 24:13 39:3 40:22 61:4,8 63:23 68:2 75:5 75:12 90:9 108:12 118:1 122:16 sent 41:15 85:14 separate 97:23 112:13 Separately 14:5 sequence 75:14 sequentially 77:7 119:25 series 59:17,21 66:12 serve 57:11 service 12:19,20 55:20 56:1 65:8 72:15,18 75:6 85:22 98:17,20 session 4:24 36:16 107:16 sessions 8:7 set 10:25 53:25 60:3 78:2 86:20 104:12 106:4 113:13 sets 13:21 setter 30:23 settlement 66:9 seven 12:23 25:2 45:11,17 47:5 48:8 63:9 79:21 107:18 Shaker 106:16 121:25 share 11:17 101:14 104:6 109:9 shared 84:4 115:1 118:13 shift 55:3 97:3 ships 62:22 short 41:11 43:13 65:10 68:6 73:10 80:10 92:12 94:19</p>	<p>shorten 99:17 107:10 shortened 42:1 107:21,21 shorter 24:24 25:5 shortest 42:9 shortly 8:7 shot 40:15 show 72:9 81:6 showing 123:8 124:16 shows 67:1 SHPOS 40:2 48:12 shrinking 78:22 85:21 side 61:14 83:22 111:20 113:2 significant 21:22 28:11 32:11 102:15 significantly 22:7 silly 111:1 simple 89:11 94:19 103:12 122:23 simpler 92:18 112:12 simplify 111:25 single 51:7 93:10,14 111:13,14 sir 71:5 82:4 99:12 121:13,15 123:9 sisters 90:12 sit 7:12 102:11 109:18 110:4 site 15:8 16:2 20:12 21:4,11 50:10,11 50:12 67:24 77:16 90:4 94:20 sites 47:19 58:13 73:12 93:1,3 114:2 sits 80:15 sitting 109:17 110:14 situation 29:12 67:3 situations 92:15 six 12:23 25:1 48:7 85:13 skip 99:23 slide 89:23 slides 37:15 slightly 101:17 slip 28:2 89:17 small 12:4 20:4 23:22 52:14 54:13 109:25 111:16,18</p>	<p>111:18 112:2 116:22 122:14,24 smaller 48:11 77:10 77:13 118:8 smooth 7:7 snow 31:7,13 32:11 33:2 solicit 4:4 9:4 10:2 10:10 solicitation 13:19 14:6 60:18 69:23 solicited 57:21 103:25 soliciting 58:20 124:7 solution 25:15,23 solve 78:25 solved 83:14 122:11 solvers 116:18 solving 78:19 82:18 83:11 88:13 somebody 34:9 59:26 86:7 98:9 111:19 someone's 76:1 somewhat 68:7 73:25 102:5 soon 50:12 sooner 56:18 sorry 33:19 36:15 40:3 59:14,16 123:18 sort 16:22 22:14 26:9 40:4 52:24 59:3,11 62:2 66:2 69:8,13 74:21 78:10 80:3 82:16 91:23 93:21 95:1 95:13 100:24 101:25 104:10,22 116:12 117:12 119:6 120:9 sorted 90:6,16 91:22 sounding 97:12 sounds 48:25 69:16 84:3 sources 103:17 South 10:21 speak 26:23 38:20 41:6 48:4 50:25 62:22 SPEAKER 17:25 speaking 8:17,18,21 8:24 9:3 96:11 112:8</p>	<p>speaks 30:18 special 72:14,23 specialist 10:22 species 16:6,9,12,16 19:23 20:7,10,19 20:22,23 21:23 34:7,13,20 39:10 43:3,5,11 51:5,15 58:4 59:24 60:2 61:10 77:17 110:9 specific 9:5 17:11 60:2 65:17 76:24 99:16 specifically 9:18 10:1 29:19 30:9 32:9 69:22 100:18 specifics 33:1 50:5 specified 9:24 125:6 spell 31:19 44:22 47:15 spelled 106:12 spelling 17:18 70:2 spend 68:24 121:3 spending 120:23 122:19 spent 102:23 spoken 31:23 staff 4:19 7:14,23 10:2 28:14,20 31:11 37:16 48:8 48:17 56:25 59:2 61:23 65:10 85:21 85:21,24 92:17 95:19 98:9 106:4 109:5,12 115:9 116:17,19 118:11 staffing 48:13 100:9 stage 6:8 10:25 31:4 stages 13:16 staked 91:13 stakeholder 7:11 74:23 75:3 92:22 stakeholders 6:17 25:10 31:2 62:13 73:14 78:2 79:6 80:8 85:10 90:16 94:17,21,22 105:6 105:7 stand 73:12 98:23 standard 19:4 20:1 25:12 26:18 60:25 99:22 standardize 91:23 standards 112:5 standing 24:20 standpoint 26:1</p>	<p>39:3 41:7 77:22 start 5:24 7:13 18:10 20:2 25:1 27:4 30:14 37:20 39:11 42:6 46:8 48:20 49:15,19 54:9,16 55:11,12 58:21 61:18 69:2 69:19 72:3 84:11 85:8 86:12 111:6 120:24 started 21:5,14 28:12 45:18 60:19 87:16 106:4 starting 52:3 75:5 state 8:19,23 12:14 14:16 15:12,21 17:16,22 25:21 26:5 27:13,14 31:19 34:23 38:21 40:2 44:22 47:15 48:11 49:9 50:3,4 50:8 56:25 57:4 58:10 62:15 63:22 64:2,21 67:11 70:1 75:18 76:7 76:10 78:2 79:10 80:23 81:4 87:7 90:2 91:17,24 92:16 94:16 97:10 102:9,13,16 105:7 106:12 118:3 state's 13:2 102:8 statement 95:3 states 15:13 25:17 25:23 40:10 50:19 50:20 55:20 56:3 75:17 80:24 81:14 81:14 83:3 120:4 status 49:21 stay 15:20,24 19:10 64:5 97:10 step 51:26 52:4 69:25 99:24 124:5 Stephanie 2:8 12:8 15:10 19:21 21:16 28:9 37:20 42:16 43:1 44:9 48:3 49:20 Stephanie's 46:16 stepped 36:13 steps 26:10 103:5,8 Stewardship 57:8 stimulate 7:12 stood 14:8,13 stop 72:20</p>
---	--	---	--	---

storage 6:5 9:23 55:18 58:15,25 67:22,22 82:25 111:4	submitting 14:25	survey 17:5 20:8,12 21:4 34:2,4,8,11 43:6,7 51:12,16	technical 13:23 84:20	114:24 117:9,11 118:21,24 121:11
stored 4:6	subsequent 4:21 68:23 72:17,20	surveyed 20:20 21:11	technology 64:9 91:21 121:19	121:17,24 123:2,3 123:9,16 124:13
straight 39:4 64:20	substantial 21:25 79:19 80:9 100:20 100:23	surveys 21:23 32:12 33:12,25 34:14,14 43:3	television 59:21	124:17,25 125:14
straightforward 84:10	substantive 68:23	Swaminathan 2:6 11:19,20,21 13:13 18:11 25:8 30:13 32:7 33:9 41:7 42:9 52:23 69:24 70:5,6	tell 45:14 79:20 80:2 93:23 120:1	thanks 56:20 57:17 74:16 95:22
strategy 68:8	succeed 118:18	sustainably 37:17	telling 18:1	101:12 111:10 117:12 121:10 124:25
streams 46:20	success 43:21 94:18	system 55:22	temperature 100:25	that'd 49:22
STREET 1:8	successful 14:20 67:13 79:8 87:3 118:16	table 7:2,23 8:20,23 25:14 55:13 66:8 76:9 90:22 111:7 117:4	tend 26:3	that's 60:19
stress 31:25	successfully 42:10 86:11	tags 8:23	tends 56:1	thereof 126:21
stretch 40:9	sudden 98:4	take 5:14 33:17 35:11 39:11 40:16 48:1 53:7 54:2,6 62:21 63:4 72:6 78:5 80:4 85:25 87:11 93:22 95:6 96:16,17 99:1,3 102:22 103:4,5 104:18 107:9,20 107:24,25 111:2 112:14 124:19	term 98:7	thin 23:22 39:23 40:9
stretched 23:22 39:23	sufficient 26:23 59:20 60:10 63:7 96:18,19	tackle 61:25	terms 18:18 30:23 31:1 32:13,14 64:20 73:6 75:13 95:12,18 100:14 107:13 117:17	thing 15:3 24:21 25:16,25 27:11 36:17,21 46:4 50:2 62:8 66:18 73:21 76:8 83:7 84:2,21 89:19 93:5 94:8,9 95:17 100:15,24 102:4 105:17 106:7,24 113:10,15 115:2 119:19,20 120:6 120:16
stretching 25:1	sufficiently 98:5	taken 20:19	terrestrial 31:8 32:10,12 33:12	things 21:10 22:14 24:9,12,15 25:9 26:14 29:11 30:16 34:12 35:22 36:15 43:2 44:2 45:13 52:2,6,10,11,14 52:16,18 62:19 63:4 64:11 76:15 78:15 79:5 82:16 83:18 84:9,20 88:3,17 89:6,18 89:23 90:10,24 91:19 93:24 95:16 97:22 100:6,7,8 100:12,14,25 101:5 102:3 103:12,16 104:6 106:1 110:10 114:6,19 115:24 117:19 120:2 122:8,20
strictly 96:11	suggest 90:18 118:5	takes 16:10 46:10 88:2,2	terrible 82:22	122:8,20
stringent 120:19 121:5	suggested 98:17,21	talk 15:23 21:17 58:19 68:25 81:20 106:19 108:2 120:12	terrific 26:9,15	think 14:25 15:1,3 15:11,20 20:4,5 22:17 23:10 26:3 26:22,24 27:7 28:6,13,14,18 29:6 30:16,18,22 31:1,14,15 32:2,8 32:14,24 33:7,23
strong 113:3,3 115:8	suggestion 69:11	talking 16:25 26:25 54:21 56:19 63:6 69:2 76:19 78:1 88:7,17 89:5 93:6 107:13,14 117:22 120:18	terrifically 33:10	
structural 29:21 30:2 71:15	suggestions 65:12	target 26:12 30:19	territory 18:23	
structurally 29:20	suite 32:18	targets 104:22	Terry 6:25 7:17	
structure 11:12 12:3 91:20 98:1 100:23	suited 70:22	team 6:25 54:13 59:6,8 102:23	test 10:5 11:6	
structured 39:24	suites 80:21	tech 109:12,15 111:20	tested 4:4 5:1 9:11 10:6,10 54:22	
structures 18:24	suits 71:14		testifying 94:12	
studies 26:11 30:10 30:25 31:8,9,12 31:22,24 32:10,14 32:17,18 33:6,12 34:20 49:24,25 71:16 72:6 75:5,7 75:10,11 88:21 90:9 96:18 99:22 105:3,6,13,17 116:2 119:2,15	summary 4:21		thank 4:14 5:20,22 5:23 6:24 7:1,8,9 8:5 11:20,25 13:6 14:15 15:6 16:1 16:18 17:9 18:9 19:15,19 21:16 23:16 24:17 25:6 26:16,21 29:5 30:8 31:16,20 33:16 34:15 35:13 36:6,11,14 37:11 37:13 38:18 39:21 41:22 42:4 44:18 48:3,24 51:18 53:15,15 55:2,6,8 56:19 57:6,18 65:23 70:4 71:3,4 71:5,25 81:22 82:4,8 83:25 84:23 86:8,9 87:9 95:23 96:1,4 99:12 102:19 104:15 106:14 108:20 109:1,7,10 109:11,13,14 110:21,22,24 113:1,20 114:22	
study 27:2 31:18 33:11 72:11 104:25 105:1,12 105:16 116:2,3,7 116:11,12 119:7 119:14	supervisor 12:9		thank 4:14 5:20,22 5:23 6:24 7:1,8,9 8:5 11:20,25 13:6 14:15 15:6 16:1 16:18 17:9 18:9 19:15,19 21:16 23:16 24:17 25:6 26:16,21 29:5 30:8 31:16,20 33:16 34:15 35:13 36:6,11,14 37:11 37:13 38:18 39:21 41:22 42:4 44:18 48:3,24 51:18 53:15,15 55:2,6,8 56:19 57:6,18 65:23 70:4 71:3,4 71:5,25 81:22 82:4,8 83:25 84:23 86:8,9 87:9 95:23 96:1,4 99:12 102:19 104:15 106:14 108:20 109:1,7,10 109:11,13,14 110:21,22,24 113:1,20 114:22	
study's 119:4	supplemented 27:1		territory 18:23	
stuff 20:19 25:1 92:1 93:23	supplied 29:14		Terry 6:25 7:17	
stupid 97:12	supplies 29:18		test 10:5 11:6	
subject 112:18	support 67:20 91:12 98:21 99:8 110:24		tested 4:4 5:1 9:11 10:6,10 54:22	
submission 23:24	supportable 79:19		testifying 94:12	
submissions 24:2	supported 99:8		thank 4:14 5:20,22 5:23 6:24 7:1,8,9 8:5 11:20,25 13:6 14:15 15:6 16:1 16:18 17:9 18:9 19:15,19 21:16 23:16 24:17 25:6 26:16,21 29:5 30:8 31:16,20 33:16 34:15 35:13 36:6,11,14 37:11 37:13 38:18 39:21 41:22 42:4 44:18 48:3,24 51:18 53:15,15 55:2,6,8 56:19 57:6,18 65:23 70:4 71:3,4 71:5,25 81:22 82:4,8 83:25 84:23 86:8,9 87:9 95:23 96:1,4 99:12 102:19 104:15 106:14 108:20 109:1,7,10 109:11,13,14 110:21,22,24 113:1,20 114:22	
submit 10:11 105:1 124:6 125:9	supposed 67:4		test 10:5 11:6	
submitted 22:1 27:18 83:1	sure 4:16 8:13,16,20 9:2 13:25 15:2 18:14 20:3 21:18 22:17 23:23 28:1 28:23 29:2 31:18 33:14 36:7 37:15 37:21 38:19 40:4 40:5 41:17,19 49:24 52:23 66:23 71:6,10,14,16 73:4 76:7 79:4 82:10 86:14 88:9 90:19 100:16 101:4,8 110:5 113:25 121:16		test 10:5 11:6	
	surface 58:2 59:24		test 10:5 11:6	
	surprise 69:10		test 10:5 11:6	
	surprised 78:10		test 10:5 11:6	

Hydropower Regulatory Efficiency Act of 2013 - March 30, 2017

<p>35:17,19 36:4,17 38:8 39:19 40:9 40:15,21 41:7 42:9,19,22 43:10 44:2,15 45:1 47:2 48:9 49:13,25 52:23 54:2 58:23 59:16,20 60:6,7 61:11,16,21 63:3 64:7 65:5,18,23 66:12,25 67:8,14 68:6,20,22 69:8 69:15,17 70:21 71:22 73:3,16,16 73:18,20 74:2,9 74:23 76:15,16,20 77:22,24 78:3,10 78:15 80:13,20,21 81:18 82:12 83:6 84:8,15,17,21 85:8,18,19 87:2,2 87:12 88:11,15 89:14 92:5 93:8 93:13,20,24 95:15 95:17 96:10,25 97:5,16,17 98:9 98:23 99:3,6,8,16 99:21,25 100:3 102:16 103:4,17 103:22 104:3,9 106:12 107:13 108:21 111:23 112:17,21 113:13 113:17 114:1,12 114:20 115:1,13 115:17,23 116:6 116:10,23 117:6,6 117:8,24 118:18 118:22 119:20,22 120:1,4,9 122:13 124:3,8,10,20 thinking 19:22 30:3 37:18 67:3 87:15 100:5 110:13 116:7 120:16 third 86:10 120:6 Thomas 2:24 57:7 thought 38:25 63:15 90:2 101:23 110:16 113:21 thought-provoking 109:4 thoughts 15:7 23:17 24:18 40:20 41:4 44:9,19 67:19 68:13 73:2 74:16</p>	<p>76:13 93:4 98:14 99:13 101:12 109:9 119:1 121:10 thousand 77:24 threatened 58:4 three 25:2 28:12 34:19,25 39:24 40:24 43:6 45:15 46:5 77:11 84:13 99:6 107:19,22,24 108:3,11 threw 22:16 throwing 92:14 thrown 98:3 thrust 118:4 Thursday 1:11 126:19 tied 44:2 81:5 tier 72:18 tight 52:18 Tim 5:22 7:1,25 54:20 109:2,11 124:23 time 5:24 7:8 9:7,25 13:9,14 14:20 16:10 17:13 19:4 19:18 21:25 22:22 23:14 25:5 26:20 27:8 28:6,8,15 29:4,7 30:6,10 31:10,22 32:1 34:7,19 36:10,21 37:24 38:5 39:16 41:9,15 42:1,3,20 42:23 45:9,10 46:7,10,17,17,18 48:1 49:3,6 50:7 52:15 53:2,14,16 54:2,6 55:7 65:10 66:13,23 68:24 69:2,18 70:13,17 70:19 71:24 73:10 76:24 78:5 82:3 82:20 84:5 87:14 88:2,3,15 90:11 90:25 91:5 93:8 96:3,17 99:17 102:24 103:11,15 105:14,25 106:13 106:22 108:7,7,10 108:13,25 109:8 116:2 119:9,10,11 120:1,23 121:8 122:13,20,21 123:8,12 124:8,16</p>	<p>timeline 52:24 68:6 90:1 108:18 timelines 22:4 27:6 28:1 62:7 timely 27:3 57:6 85:18 94:23 111:3 times 22:10 23:20 23:21 27:12 43:4 49:10 timing 62:17 Timothy 2:4 4:9 tiny 39:23 TLP 62:6 80:16 86:4 104:20 today 4:12,15,22 6:9 7:4,11 8:5,12 9:10 42:14 54:21 56:19 66:23 88:12 94:1 98:25 106:13 107:16 117:10 120:19 123:11 124:19 125:1,10 today's 8:15 10:9 110:25 tolerable 41:12 Tom 92:6 tool 114:7 top 46:19 48:13 topic 5:23 17:15 71:22 76:14 95:25 97:7 98:15 106:11 topics 97:25 107:1 topography 56:2 total 11:13 101:1 touch 27:11 36:20 71:19 81:18 114:15,21 touched 26:25 32:9 touchy-feely 82:16 tough 40:16 52:15 track 38:24 40:8,23 tracking 41:4 tradeoffs 87:4 traditional 107:4 122:7 training 114:16 115:9 116:17,17 116:18 transcribe 70:3 transcript 125:11 126:21 transcription 126:22 transfer 18:7 translate 35:7 84:4 transmission 24:11</p>	<p>51:24 52:1 transparent 41:15 transportation 39:25 40:1 travelling 5:25 treated 85:16 treating 19:8 treatment 70:23 tremendous 34:19 37:2 91:15,16 97:20 111:18,20 tremendously 111:12 tribal 114:5 tribes 121:10 tried 97:11 103:7 104:20 tries 76:22 trouble 32:25 true 15:20,24 23:3 94:3 truly 38:6 try 36:18 37:1 52:16 62:7,22 71:17 78:3,13,20 82:22 103:23 104:23 106:7 110:13,19 113:9 114:7 124:2 trying 35:18 47:25 59:8 77:5 83:13 83:17 84:19 89:3 91:12 102:25 103:2,18 104:13 106:24 108:16 113:7 114:10 115:14 tsunami 57:3 turn 5:10,18 8:13 8:21 17:16,24 44:21 54:6,17 59:25 95:23 102:19 122:13 124:23 turnaround 23:20 turned 31:8 105:20 turnover 28:11 48:11 turns 68:8 Turpin 6:25 7:17 two 4:5 5:1,6 7:21 9:11,12,21,24 10:3,5,6,10,14,14 11:2,6,13 13:8,12 13:20,21 14:20,22 14:25 15:4 19:6,7 20:22 23:25 24:3</p>	<p>25:8 27:8 29:11 40:23 41:1,8 42:8 43:2,9,13,17,24 44:2,6,11 45:8,9 47:21 49:5 54:22 55:5 58:6,11 59:18 60:7 63:16 63:16 68:25 69:17 70:8 72:2 74:15 76:4,16,18,20 77:11,23 78:4 80:3 81:25 86:10 86:15 87:5,14,16 87:21 88:4,5,9,15 88:19,22 89:16,19 92:3,23 93:8 94:15,25 98:22 101:25 103:2,20 104:4,22 106:1 107:13,17 108:6 109:6,14 111:9 115:1 118:17 120:21 123:22 124:7 125:3,5 two-year 46:11 type 16:14 30:24 33:6 37:19 39:18 87:24 types 40:16 116:20 typical 24:6 25:19 typically 16:8 21:11 21:20,24 22:2 111:13</p> <hr/> <p style="text-align: center;">U</p> <hr/> <p>U.S 56:6 75:6 105:8 ultimate 66:9 87:25 ultimately 13:25 26:6 61:13 67:10 121:4 un 107:22 unaddressed 34:10 unbelievably 27:17 38:25 uncertain 41:13 uncharted 59:3 unconditional 51:2 understand 35:3,10 61:19 94:8 97:16 100:10 101:23 103:2,7,20 112:2 116:4 understanding 94:2 understood 23:25 71:10 undertaking 118:6</p>
--	--	--	--	---

undertakings 13:3	various 13:16 24:8	122:8	70:7,11 75:5,20	window 25:5 43:14
undertook 13:20	52:6 53:3 80:24	Wasserman 2:11,25	78:1,14 80:23	108:16
unfortunately 65:2	116:1,19	17:19,19 18:1,5	86:9,18 88:12	winning 32:3
UNIDENTIFIED	vary 50:3	34:17 55:12 59:13	89:22 90:13,24	winter 34:3,4
17:25	versa 103:6	59:16 62:24 63:2	91:9 93:1,2,6,18	wish 80:16 98:11
unique 20:4 78:1,2	vice 103:6	79:11,12,14 91:7	93:24 96:17,20	woman 45:20
78:3 95:4	view 41:10 60:23	91:8 96:9,10	97:13 98:11 99:2	wonder 31:24 86:6
uniquely 78:17	64:8 87:7	111:6,9	103:22 104:11	wondered 31:22
United 55:20 56:3	views 86:13	waste 121:7	106:5,6 107:13,14	wonderful 110:23
83:3	Vince 2:13 7:14	wasting 29:4	108:16 111:5	wondering 101:24
units 11:13	35:14,16 49:8	water 5:12,16 12:9	115:3,8,14,17	117:13 118:4
unnecessarily 109:3	59:8 78:22 124:4	12:10 19:23 22:20	117:1,6 118:22	word 84:25
unnecessary 59:6	Vince's 52:24	29:13,18 34:22	120:18 124:1,7	words 68:3 78:11
61:15,24 62:25	violets 78:22	35:24 47:22 49:10	we've 6:7 7:24	work 6:22,23 7:2
68:15	Virtually 64:16,17	49:12,17 56:2,3,9	18:22,24 22:25	16:10,16 18:15,19
unpowered 67:25	virtue 41:8,21	56:24 57:2,10	25:20,22 28:12	23:8 25:13 31:13
unreadable 103:14	visit 50:11,12	58:17 75:17,21,25	29:13 32:8,16,18	31:15 33:11 36:23
unreasonableness	visits 50:11	83:2 90:3,6,7	33:1 40:22 44:15	37:19 39:5 41:16
64:25		96:14 110:11	46:6 50:11 51:14	41:18 42:6 46:17
unrelated 26:2	W	117:19	53:24 62:22 63:6	50:21 53:9 56:8
untrue 116:8	W-a-s-s-e-r-m-a-n	waters 12:15 117:3	79:17 87:23 88:17	56:25 57:2 59:11
unusual 25:16 31:8	17:20	waterway 101:11	107:17 114:18	60:9,9,14 64:4
updates 49:21	waiting 52:10	way 7:1 19:8 23:1	117:7 119:21	67:2,2 75:23
upfront 26:12 28:4	104:11	23:10 26:10 37:10	we're 60:22	76:11 78:3 79:9
28:7 77:5,8 91:23	waivers 97:22,24	44:16 48:20 51:5	wear 39:15	79:18,25 80:6,22
115:12	waiving 97:23	61:12 67:11 74:4	weather 32:10	81:13,21 87:14
upside 24:24	walls 30:5	75:22 79:7 81:4	webcast 8:16	89:2,6 92:25
upstream 45:7	want 5:23 7:1 18:9	83:2,11 84:3	website 95:20	95:22 97:2 107:5
107:18	27:11 30:14 36:7	87:14 88:23 89:1	weekly 28:19	107:5,12 108:3,14
urgency 66:14	37:14 38:15 44:10	93:9,9,16 107:5	weeks 85:14	110:10,18 115:12
USACE 70:13,18	44:13 47:1 48:1,5	112:25 122:5,8,10	weigh 51:1 86:16	117:3,8
70:19	49:21 50:24 52:21	123:24	weird 103:13	workable 112:5
use 8:16,17 13:8	53:15 54:16 55:6	ways 6:22 20:6	welcome 4:3	worked 10:22 12:21
29:13 35:9 43:17	58:19 59:2 61:17	62:20 83:13 91:22	went 6:9 18:16 24:2	25:15 31:6 45:22
58:6,6,9,11 64:10	66:15 67:16 69:14	96:7 98:22 103:1	24:4 43:11 45:19	45:23 54:14 59:8
64:12 65:11 68:4	77:6 81:14 84:7	we'll 4:20,25 5:5	47:4,6 62:5 63:22	62:6 84:11,19
69:14 72:15,23	92:3 96:8 100:13	7:23 8:6 19:8 54:2	104:17 105:5,6,18	92:15 109:6,13
74:12 88:10 92:9	100:16 101:4,8,19	55:11,13 57:18	weren't 28:2 29:3	110:5
92:10 98:10	104:6 107:2	71:19,25 84:25	39:8 61:25 63:13	working 6:25 25:22
101:19,21,24	109:11,14 111:5	111:6	69:25 120:23	27:8,13 45:18
102:5 106:21	118:4,21 123:24	we're 4:17 5:21 6:8	West 5:25	64:18 67:9 69:9
useable 37:23 38:3	wanted 22:13 24:17	6:18 7:9 11:23	wheel 62:21	69:19 88:12 91:3
uses 29:14,16 58:2	25:7,8 36:15 62:2	12:4,5 15:22	white 57:10	102:24 110:2,6
64:9 110:11	78:25 83:3 84:24	18:17 19:6 23:21	Whitewater 57:8	111:19 113:4,16
usually 72:5,16,17	85:2 94:9 104:24	24:25 26:6,25	wide 118:18	115:9,17 116:24
77:11,13,14	106:17 107:11	27:12,13 28:3,4	wilderness 114:19	117:7
V	109:7,11 118:9	29:9,11 33:3	wildlife 12:19 24:5	workload 38:21
valid 48:10	121:22	35:18 37:18 39:23	46:4,7 57:2 58:10	works 35:11 64:12
Valley 64:18	wants 34:9 47:13	39:23 40:6,24	60:1 63:22 105:8	67:2 94:21 100:24
value 34:24 108:5,5	warning 64:1	43:4,6,7 44:3	William 2:15,23	103:24 106:5,6
108:13	Washington 1:9	47:25 48:25 49:24	31:21	workshop 4:3,17,20
values 117:19	55:21 126:18	51:2,25 52:10	willing 15:3 31:15	7:3,21 8:12 10:2,9
variables 118:1	wasn't 25:14 38:24	53:9 54:9,21 55:3	61:25 70:19 92:10	35:19 38:11 42:21
variations 22:13	51:5 66:19,19,19	55:4,9,12 57:5	96:16	53:23 54:1 65:9
variety 13:23 14:11	83:2 88:9 98:7	59:5 62:18,18,21	willingness 18:15	98:17 109:8 125:1
	102:25 109:20,23	63:16,17 66:14,22	wind 91:12	125:15

Hydropower Regulatory Efficiency Act of 2013 - March 30, 2017

<p>world 79:16 83:6 worry 90:11 worse 34:9 worth 92:20 worthwhile 37:24 wouldn't 71:1 75:2 85:5 103:16 119:11 121:7 wow 39:1 wrap 123:16 write 61:20 written 53:20,22 73:5 94:7 125:7,8 125:9 wrong 59:7</p> <hr/> <p style="text-align: center;">X</p> <hr/> <p style="text-align: center;">Y</p> <hr/> <p>yeah 15:11 16:2 17:25 18:22 25:8 27:10 28:10 30:13 40:21 43:1 44:10 44:13 47:14 51:1 67:19 70:5 73:2 81:10 96:17 99:11 99:13 118:25 year 4:5 5:1,6 7:21 9:11,12,21,24 10:3,5,6,11,14,14 11:2,6 13:8,12,20 14:20,25 15:5 19:7 23:25 24:3 27:8 41:2,8 42:8 43:3,9,13 44:6 45:9 49:5 54:22 55:5 58:6,11 70:8 72:2 74:15 75:7 75:10,11 76:4,16 76:22 77:11,23 78:4 81:2 86:10 86:15 87:14 88:4 88:15,19,22 89:16 89:19 92:23 93:8 94:14 98:22 101:25 105:1,3,13 107:13,14,15 108:10 109:6,14 110:15 118:17 120:21 123:22 124:7 125:3,5 Yearick 2:13 7:14 35:16,16 49:8,8 124:3,4,4 years 12:20,22 14:22 17:1 25:2</p>	<p>43:6,17 44:11 45:11,17,24 47:6 57:16 63:9,9,16 63:17 67:9 68:25 69:17 73:8 76:18 76:20 79:21,22 80:3,10 84:13 87:5,16,21 88:6,9 92:3 94:14,15,25 95:2,11 107:19,19 107:22,25 108:3 108:11 109:22 121:4 122:5 York 56:24,25 57:4 67:11 102:8 younger 48:13</p> <hr/> <p style="text-align: center;">Z</p> <hr/> <p style="text-align: center;">0</p> <hr/> <p>05 19:3 06 19:3</p> <hr/> <p style="text-align: center;">1</p> <hr/> <p>10 12:20 56:8 81:14 111:11,11,15 112:1,4,11 100 49:23 106 13:5 16:20 19:24 23:18,24 44:5 49:14 50:25 51:20,24 11 5:2 10:7,23 11:9 11:16,23 12:7 13:12 14:13,13 24:14 32:15 38:9 45:7 47:4 54:15 70:9 107:18 12 12:5 19:8 24:25 45:5 47:5,23 107:18 12:00 1:12 1300 86:19 135 39:11 14 12:6 18:24 19:8 45:6 47:5 107:18 14276 5:3 14th 53:21 125:7 15 5:14 53:25 65:20 160 57:12 1920s 19:1</p> <hr/> <p style="text-align: center;">2</p> <hr/> <p>2:30 54:2,3 20 57:16 110:15 200 55:23</p>	<p>2000s 19:3 2003 4:8 126:7 2004 19:3 2012 47:7,11 2013 1:3 6:2 9:17,19 10:4 36:21 2014 10:8 75:16 2015 47:11 2016 10:8 11:15 2017 1:11 10:18 53:21 125:7 126:19 20426 1:9 21st 85:19 22nd 10:4 29th 10:18</p> <hr/> <p style="text-align: center;">3</p> <hr/> <p>30 1:11 15:15 23:13 55:24 109:22 126:19 30th 53:23 125:7 38 86:19</p> <hr/> <p style="text-align: center;">4</p> <hr/> <p>4:28 125:16 401 12:9,16 15:12 15:18 19:23 21:17 25:17 64:2 404 56:9 408 56:11 69:13 71:13</p> <hr/> <p style="text-align: center;">5</p> <hr/> <p>5 11:14 5th 10:8,8 11:14</p> <hr/> <p style="text-align: center;">6</p> <hr/> <p>6 4:7,13 9:18,20</p> <hr/> <p style="text-align: center;">7</p> <hr/> <p>7 19:2</p> <hr/> <p style="text-align: center;">8</p> <hr/> <p>8,000 64:15 80 56:2 888 1:8</p> <hr/> <p style="text-align: center;">9</p> <hr/> <p>90 79:9 9th 9:19</p>		
--	---	--	--	--