DOE's Water Power Technologies Office (WPTO)

U.S. DEPARTMENT OF ENERGY | Energy Efficiency & Renewable Energy

Logistics Overview

Allison Johnson

WPTO Peer Review

October 8, 2019

Thank you to our MHK reviewers

Foundational R&D, Technology Design, and Validation Panel

- **Elaine Buck,** European Marine Energy Centre (MHK Chair/Panel Lead)
- **Alex Fleming,** iMetalx Group LLC
- **Andy Hamilton,** Monterey Bay Aquarium Research Institute
- **Henry Jeffrey,** The University of Edinburgh
- **Jim Bretl,** Korvis Automation
- **Mike Muglia,** University of North Carolina

Reducing Barriers to Testing and Data Sharing Panel

- **Chris Bassett,** University of Washington (Panel Lead)
- **Anu Kumar,** U.S. Navy, Living Marine Resources Program
- **Gayle Zydlewski,** University of Maine
- **Jason Wood,** SMRU Consulting
- **Martin Wosnik,** University of New Hampshire
- **Whitney Hauer,** BOEM Pacific OCS Office

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New Technology and Modernization Panel
- **Greg D. Lewis,** Duke Energy (Hydro Chair/Panel Lead)
- **David Hanson,** Retired (formerly Sacramento Municipal Utility District)
- **David Sinclair,** Advanced Hydro Solutions
- **Steve Lewis,** Sapere Consulting

Environmental R&D and Data Management Panel
- **Tim Brush**, Inter-Fluve (Panel Lead)
- **Colleen McNally-Murphy**, American Rivers
- **Edith Zagona**, University of Colorado-Boulder
- **Juliusz Kirejczyk**, Independent Consultant

Grid Reliability and Resilience Panel
- **Scott Flake**, Independent Consultant (Panel Lead)
- **John Simonelli**, Retired (formerly ISO New England)
- **Charlton Clark,** formerly DOE
- **Tom Acker**, Northern Arizona University

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Special thanks to:

- Rajesh Dham

- Jeff Rieks

- Sandyn Skudneski

And especially:

- Ali Hewett

- Alex Lemke

- <u>The rule for all presentations is 2/3 of timeslot dedicated to remarks, 1/3 for Q&A.</u>

- Most project presentations will be kept to a strict 20 minutes, with 10 minutes of Q&A following.

- Some presentations were given longer timeslots. The ratio is still the same.

- A yellow card will be flashed at the last 5 minutes, and then a red card will be held when time is up.

- Please respect your fellow presenters by keeping within your allotted time.

- The Review Panel Lead will kick off the Q&A, then allow questions from the other reviewers, and then the audience, time permitting.

- Any questions left unanswered due to time limitations can be addressed during the <u>End-of-session Networking Activity</u>.

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- Opportunity for any outstanding questions from earlier presentations due to time limitations

- Also an opportunity for the WPTO session leads to gather feedback from the audience as a whole. She/he will take notes on a large sticky pad of any key themes, takeaways, or recommendations shared.

- These notes will inform the agenda for the Thursday Town Hall.

3:10 PM	3:40 PM	North American Renewable Integration Study	Greg Brinkman	NREL	Grid	Washington/Jefferson
3:40 PM	3:50 PM	Coffee Break				
3:50 PM	4:00 PM	Introduce Lab Projects	Sam Bockenhauer	WPTO	Grid	Washington/Jefferson
4:00 PM	4:30 PM	Valuation Guidance and Techno-Economic Studies for Pumped Storage Hydropower	Vladimir Koritarov	ANL	Grid	Washington/Jefferson
4:30 PM	5:00 PM	Integrated Hydropower and Storage Systems Operation for Enhanced Grid Services	Thomas Mosier	INL	Grid	Washington/Jefferson
5:00 PM	5:30 PM	Modeling the Value of Networked, Small Hydro Generators to the Grid	Greg Stark	NREL	Grid	Washington/Jefferson
5:30 PM	5:50 PM	End-of-Session Networking Activity	All recent presenters	All recent presenters	Grid	Washington/Jefferson

- Open to all Peer Review attendees

- Reviewers are optional

- All WPTO staff in attendance

- We will have note takers

- WPTO is looking to document this feedback in a section of the Peer Review report dedicated to feedback from general attendees

3:30 PM	3:45 PM	Coffee Break and Transition				
3:45 PM	5:30 PM	"Town Hall" with WPTO Staff (open feedback forum for all attendees)	All attendees	All attendees	Plenary	Grand Ballroom A/B/C
5:30 PM	6:00 PM	Peer Reviewer Only Meetings (all MHK reviewers)				Madison

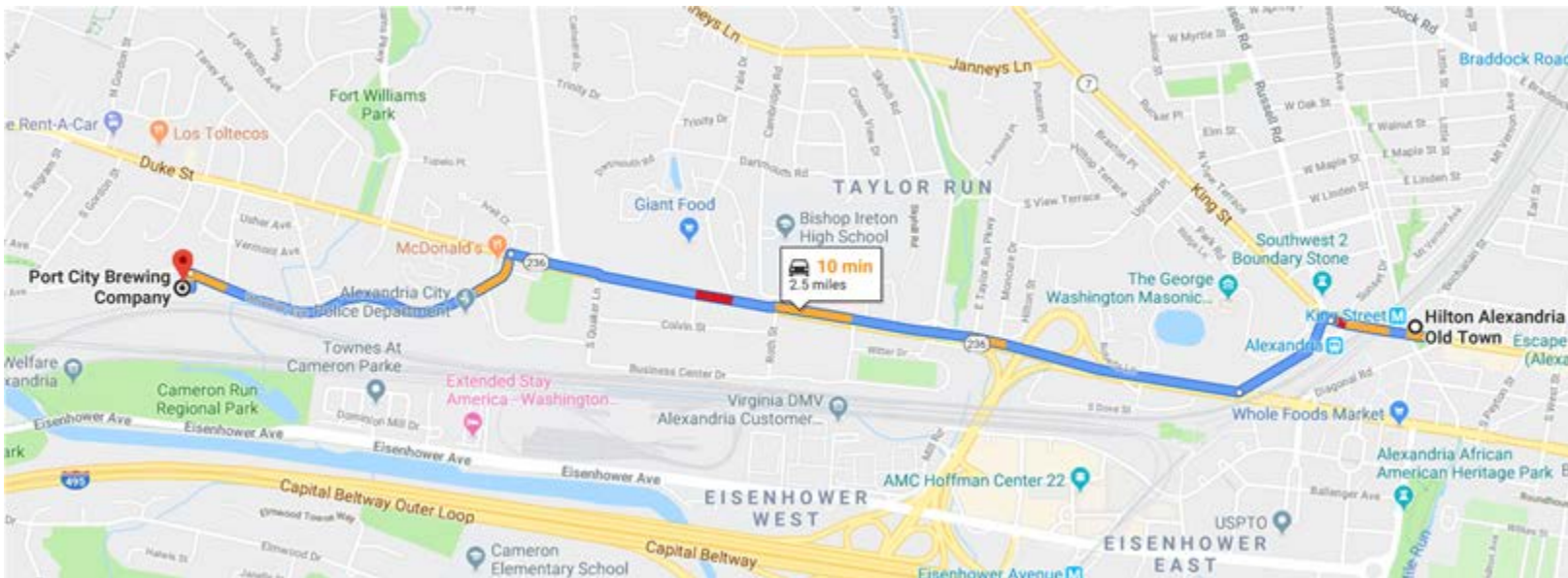U.S. DEPARTMENT OF **ENERGY** | Energy Efficiency & Renewable Energy

- dedicated networking breaks and discussion time throughout the week, in addition to Q&A sessions

- comment boxes in all session rooms for attendees to submit feedback anonymously

- end-of-review Town Hall on Thursday afternoon (open feedback forum with WPTO staff for all Peer Review attendees)

- post-event survey (over email)

WPTO should do more to…

Optimal WIT (Water Inspired Trivia)

Wednesday 6:15PM $30 Registration

Food truck will be onsite with food available for purchase.

Dedicated Wi-Fi: HHonors_Meeting

FREE public transit with the King Street trolley (stop around the corner from the Hilton on King Street) – or a quick walk

Please be respectful to presenters and silence your phones.

If you did not register beforehand, please visit the registration table to sign-in and hand write a badge.

If you have dietary restrictions, please visit the registration desk for your dietary card.

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Tuesday, October 8th

- Plenary
- MHK Program Overview
- WPTO Support to Testing
- Foundational and Crosscutting R&D

Wednesday, October 9th

- PacWave
- Foundational and Crosscutting R&D
- Technology-Specific Design and Validation

Thursday, October 10th

- Technology-Specific Design and Validation
- Powering the Blue Economy
- Town Hall

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Tuesday, October 8th

- Plenary
- Hydropower Program Overview
- Hydropower Vision Roadmap Update
- HydroWIRES
- Big-Data Access and Management

Wednesday, October 9th

- Hydro Plenary
- Environmental R&D and Hydrologic Systems Science

Thursday, October 10th

- Hydro Plenary
- Environmental R&D and Hydrologic Systems Science
- Town Hall

Backup

Peer review is defined as:

A rigorous, formal, and documented evaluation process using objective criteria and qualified and independent reviewers to make a judgment of the technical/ scientific/business merit, the actual or anticipated results, and the productivity and management effectiveness of an Office's portfolio of projects.[2]

- Essential to providing robust, documented feedback to inform program planning
- Essential to designing future program and/to enhancing existing efforts

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From DOE's Office of Energy Efficiency and Renewable Energy (EERE)
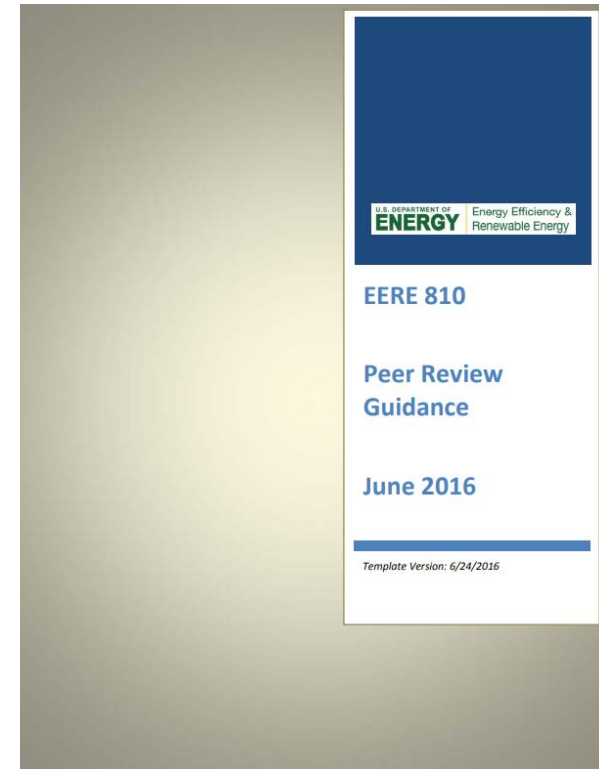
3.1 Scope and Frequency of Review

Offices will Peer Review 80-90% of their office funding for the total active project portfolio (based upon dollar value), and 100% of key projects.[5] All projects should be considered for review a minimum of every two years. With Director or DAS approval, an office has flexibility to exclude projects from review, as appropriate. Examples of reasons for excluding a project may include:

- Project recently awarded and not started;
- Project is being closed out/retired;
- SBIR project; or
- Congressionally-Directed Projects (CDP).

3.3 Evaluation Criteria

Clear criteria for evaluating the projects must be defined prior to the Peer Review. At minimum, projects should be assessed on **quality; productivity and accomplishments**; **relevance** of project success to EERE and programmatic goals, including alignment with EERE Strategic Goals; and **project management** (planning, executing, monitoring, and controlling). Offices may choose to identify and define additional criteria. Examples may include:

- Approach to performing the work;
- Accomplishments, results and progress;
- Collaboration and coordination with other institutions; and

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EERE 810

Peer Review Guidance

June 2016

Template Version: 6/24/2016

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> ➤ FY17, FY18, Q1 and Q2 of FY19 (October 2016 – March 2019)
> ➤ Projects with industry & academia as well as national labs
> ➤ 80-90% of office funding for "**total <u>active</u> project portfolio**" (including FOAs & AOPs*)

Examples of funding that the program could choose to omit include:

- A FOA project that was **active in FY17 but only for closeout activities**.

- A FOA project using FY18 dollars but was **not awarded/started until FY19.**

- A lab project using FY18 dollars but was only focused on preliminary scoping activities.

- A project associated with DOE's Grid Modernization Initiative (GMI) that was already reviewed in the recent GMI peer review (however, there may be value in reviewing again with water power subject matter experts)

*FOA = Funding Opportunity Announcement

AOP = Annual Operating Plan

Session blocks not drawn to scale

Day	Time	Room 1	Room 2	Room 3	Room 4
Monday 10/7	Afternoon	MHK Workshops & Side Meetings		Finalists Pitch Contest: FAST Commissioning for Pumped-Storage Hydropower Prize *(open to the public)*	
	Evening	Social Event			
Tuesday 10/8	Morning	WPTO-level plenary			
		MHK Program Overview		Hydro Program Overview	
		WPTO Support to Testing			
	Afternoon	Foundational R&D, Technology Design & Validation	Reducing Barriers to Testing & Data Sharing	Hydropower Vision Report Roadmap Update	
				HydroWIRES Overview	
				Grid Reliability and Resilience	Environmental & Data
	Evening	Reviewers-Only Meetings/Debrief, then Social Event			
Wednesday 10/9	Morning	PacWave		Hydro-focused plenary	
		Foundational R&D, Technology Design & Validation (Cont.)	Reducing Barriers to Testing & Data Sharing (Cont.)	Grid Reliability and Resilience (Cont.)	Environmental & Data
	Afternoon			New Technology & Modernization	
	Evening	Reviewers-Only Meetings/Debrief, then Social Event			
Thursday 10/10	Morning	Foundational R&D, Technology Design & Validation (Cont.)	Reducing Barriers to Testing & Data Sharing (Cont.)	Hydro-focused plenary	
				New Technology & Modernization (Cont.)	Environmental & Data
	Afternoon	Powering the Blue Economy			
		End-of-Review "Town Hall"			
		Social Event			
Friday 10/11	Morning			Hydro Reviewers report out to WPTO (closed door meeting)	
	Afternoon	MHK Reviewers report out to WPTO (closed door meeting)			