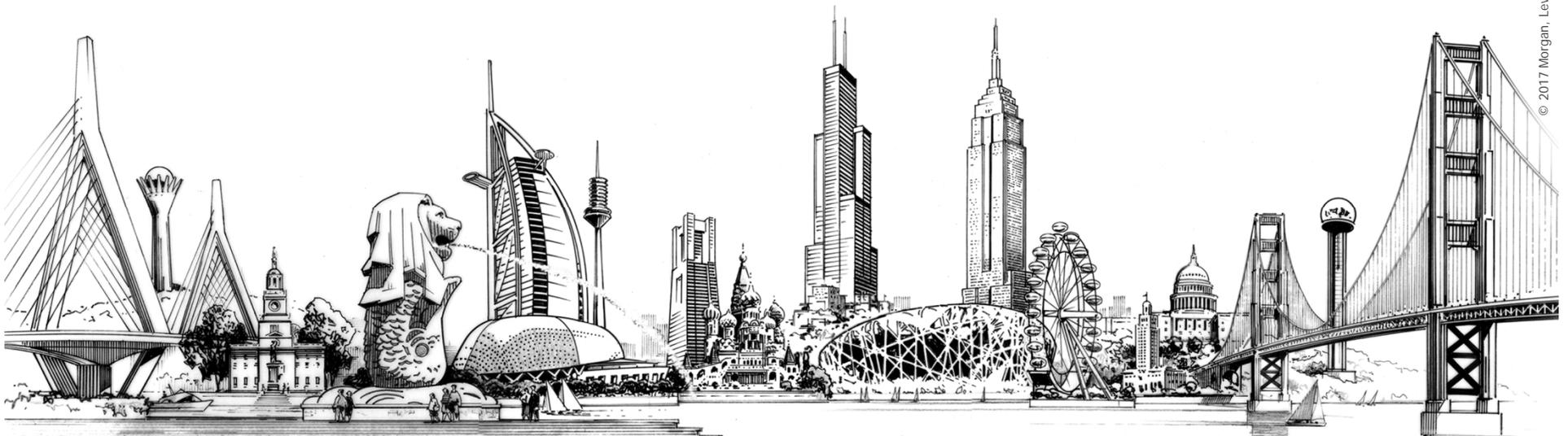


Morgan Lewis

ANCIENT POWER, NEW INITIATIVES: FEDERAL REGULATORY INITIATIVES TO EXPAND HYDROPOWER

J. Daniel Skees
October 3, 2017



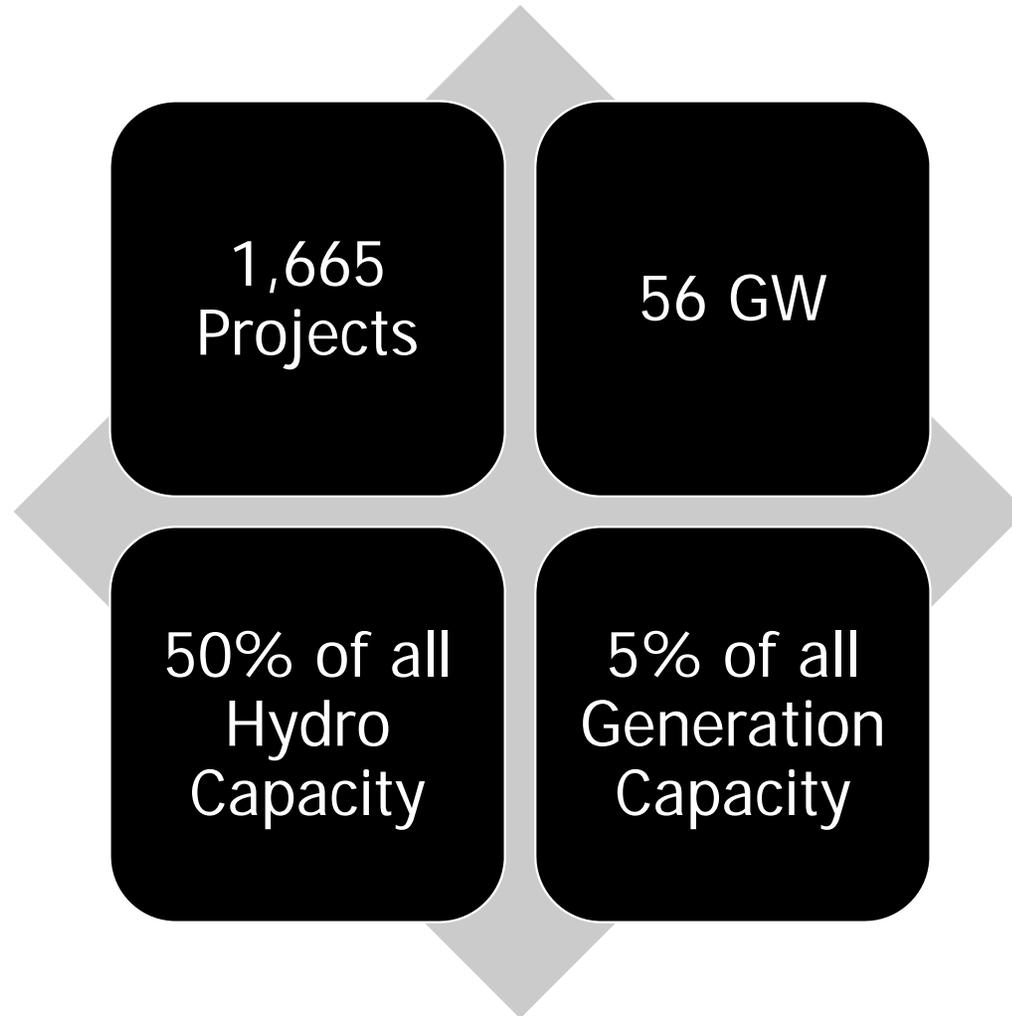
Before we begin...

- If you are experiencing technical difficulties, please contact WebEx Tech Support at +1.888.447.1119.
- The Q&A tab is located near the bottom right hand side of your screen; choose “All Panelists” before clicking “Send.”
- We will mention a code at some point during the presentation for attendees who requested CLE. Please make note of that code, and insert it in the pop-up survey that will appear in a new browser tab after you exit out of this webinar. You must complete the survey to receive CLE credit. You will receive a Certificate of Attendance from our CLE team in approximately 30 to 45 days.
- The audio will remain quiet until we begin at 1:00 pm ET.
- This event uses the Audio Broadcasting feature. You will hear sound through your computer speakers/headphones. Make sure your speakers are ON and UNMUTED.
- If you would prefer to access the audio for today’s presentation by telephone, please click the “phone” icon below your name on the Participants Panel for teleconference information.

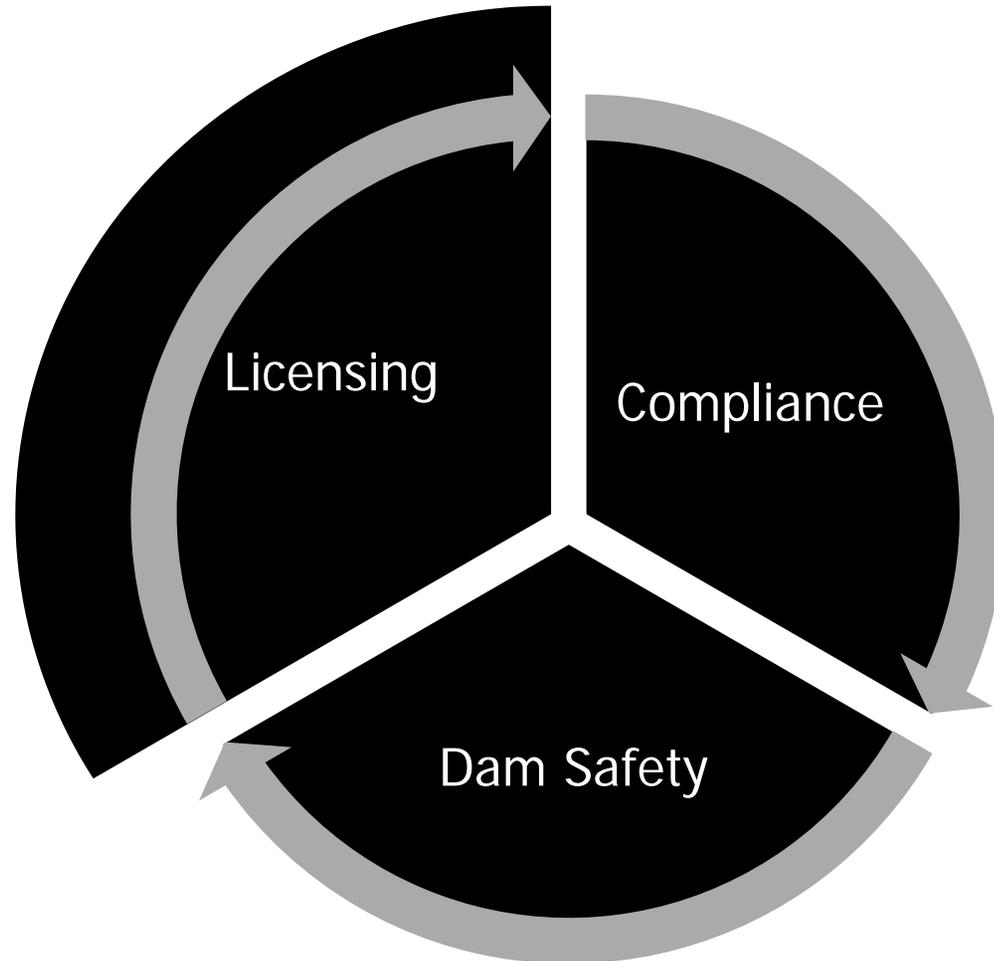
Agenda

- Efforts to streamline licensing proceedings
- Conversion of non-powered dams
- Reductions in the land use charges for hydropower projects
- Development of pumped storage projects
- Questions

The Scope of FERC-Regulated Hydropower Projects



FERC's Hydropower Responsibilities



SECTION 01

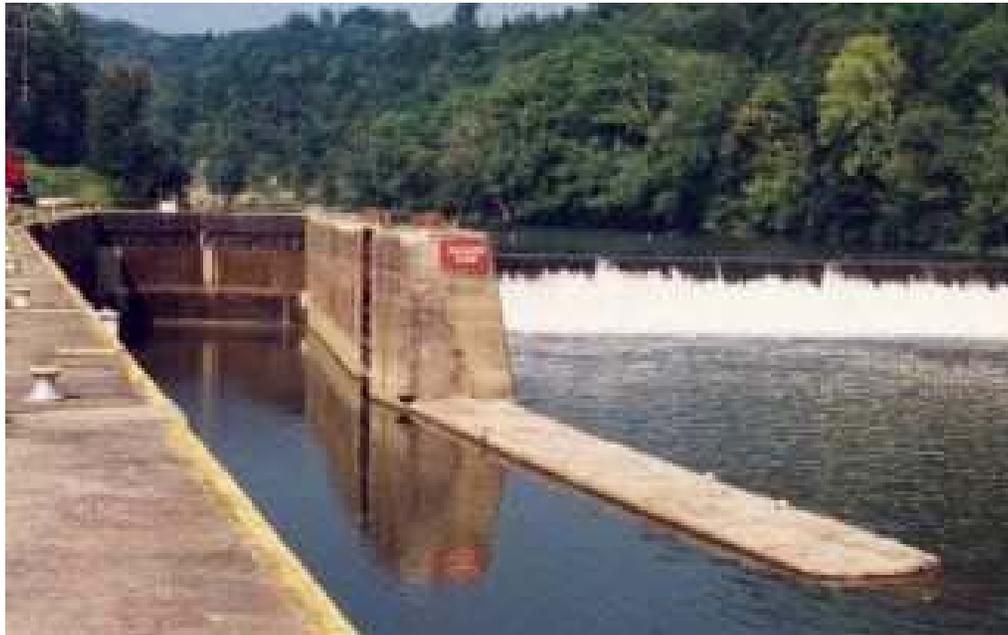
STREAMLINING LICENSE PROCEEDINGS

Hydropower Regulatory Efficiency Act of 2013

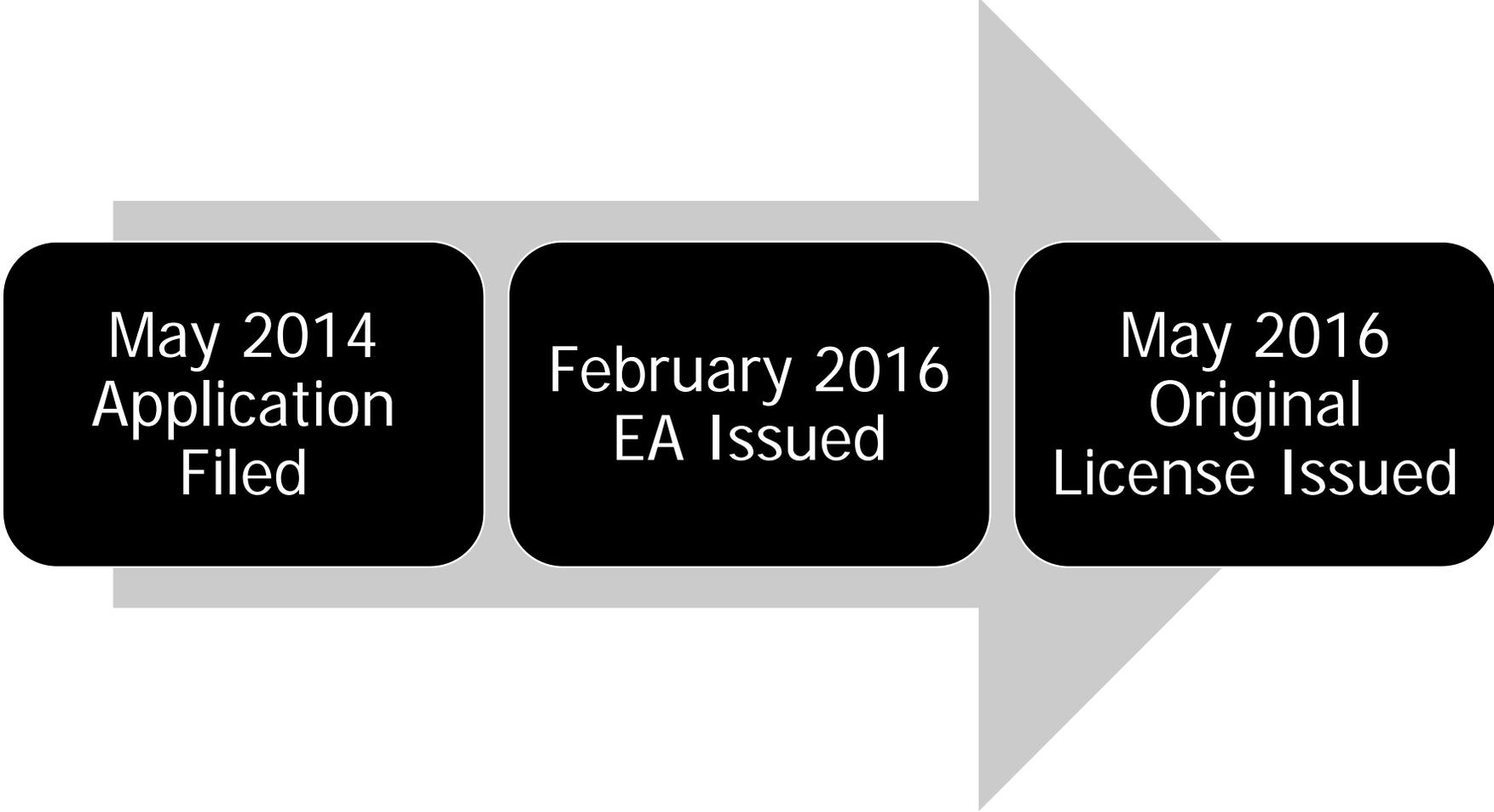
- Section 6 of the Hydropower Regulatory Efficiency Act of 2013, Pub. L. 113-23, § 6, 127 Stat. 493 (2013):
 - Directed FERC to investigate the feasibility of the issuance of a license for hydropower development at non-powered dams and closed-loop pumped storage projects in two-years
 - Directed FERC to explain how it can revise its regulations to provide for licensing within two years for appropriate projects or identify what, if anything, makes two-year licensing impractical
- FERC study selected two projects meeting the following criteria:
 - Located at a non-powered dam or closed-loop pumped storage
 - A project proposal that is well-developed with detailed descriptions of necessary facilities
 - Project would be located in areas with significant existing information on environmental issues and effects

Kentucky River Lock and Dam No. 11 Hydroelectric Project No. 14276

- 5 MW capacity (two turbines)
- 18,500 MWh annually
- Existing dam and reservoir
- Run-of-river
- 4.5 MW 69 kV transmission line



Rye Development's L&D 11 Project



May 2014
Application
Filed

February 2016
EA Issued

May 2016
Original
License Issued

Comparison to Other Projects

- Between 2013 and 2016: 83 projects received original licenses
 - 23 (~28%) issued in two years or less; median time 1.36 years
 - 3.34 years median for all projects
 - 1.55 years for pre-filing
 - 1.79 after application filing
 - Other projects taking longer than two years
 - Larger capacity
 - More environmental issues
 - Often required more additional information
 - Licensing processes used:
 - Traditional licensing process for 52 projects
 - Integrated licensing for 7 projects
 - Alternative licensing for 4 projects
 - 19 projects received small hydropower exemptions

Characteristics of Projects with Short Licensing Periods

- Small, low-capacity projects at existing infrastructure
- Sites that require little change to environmental resources
 - Changes in river flow take longer to license
 - Minimal land clearing
 - No significant change in water quality
 - No adverse effects on protected species
- Projects with complete PADs at filing that address stakeholder concerns
- Projects without significant stakeholder concerns leading to disputes about need for certain studies
- Applications that contain all necessary information, removing need for deficiency letters
- Mandatory conditioning agencies filed timely conditions and prescriptions
- Early coordination with agency providing water quality certification
- Pre-negotiated environmental measures with other agencies

Legislative Proposals

- Promoting Hydropower Development at Existing Non-Powered Dams Act
 - Authority to grant exemptions from licensing requirements for qualifying facilities after consultation with agencies
 - Exemptions can be conditioned on certain requirements
 - Limits review of requested exemptions to an EA
- Promoting Closed-Loop Pumped Storage Hydropower Act
 - Removes ability of FERC to impose conditions under FPA sections 4(e), 10(a), 10(g), and 109(j)
 - Conditions only limited to public safety and those “reasonable, economically feasible, and essential” to protecting the environment
- Promoting Small Conduit Hydropower Facilities Act
 - Small conduit facilities exempt from FPA licensing
 - Non-federally-owned conduit; 2 MW or less; not already licensed or holding an exemption
- The Hydropower Policy Modernization Act of 2017
 - Defines hydropower as a form of renewable energy
 - Allows FERC to extend a preliminary permit for four years
 - Requires FERC to set aggressive licensing schedules binding on other agencies

SECTION 02

CONVERSION OF NONPOWERED DAMS

Nonpower Dam Potential

- There are approximately 80,000 nonpowered dams in the US
- Only 3% of all dams in US produce electricity
- Converting one hundred existing nonpowered dams could add 12 GW of power
 - Most owned by the Army Corps of Engineers (including all of top ten with most potential as identified by DOE)
- Faster licensing process, with less licensing risk, and less environmental impact as compared to an entirely new project
- Growing approach:
 - 126 MW of generation from conversion in 2006-2015
 - 300 MW in 2016 (projected)

FERC & Army Corps MOU

- Executed in July 2016 “to facilitate the development of hydropower at the Corps’ federal facilities by synchronizing each agency’s permitting process”
- Synchronized approach:
 - Phase 1: Developer and agencies’ staff coordinate to discuss proposal and necessary information for agency analyses with goal of single joint environmental document
 - Phase 2: Continued coordination to prepare final project design and after ACE preconstruction requirements are met, FERC authorizes construction to begin

Example FERC Projects

- Red Rock Hydroelectric Project (Missouri River Energy Services)
 - Army Corps of Engineers dam
 - 36.4 MW capacity
- Smithland Locks and Dam (American Municipal Power)
 - Army Corps of Engineers locks and dam
 - 76 MW capacity

SECTION 03

LAND USE CHARGES

FPA Requirements for Land Use Charges

- Under section 10(e)(1) of the Federal Power Act (16 USC 803(e)(1)), any hydropower licensees with federal lands in their project boundaries must pay for their use of those lands
 - 12.5% to the Treasury
 - 50% to the federal reclamation fund
 - 37.5% to the treasury of the relevant state
 - None of these fees are used for FERC operations
- Currently calculated using a fee schedule method, based on BLM method for right-of-way rental rates
 - Published in an annual fee schedule by geographic area
- A licensee's fee is based on the on the geographic area fee multiplied by the number of acres of federal land within the project area

Proposed Changes for Alaska

- Alaska Federal Land Fees Group petitioned FERC to calculate an adjusted average statewide per-acre land value for Alaska that would be applied to all projects outside the Aleutian Islands area
 - Alaska Electric Light and Power
 - Bradley Lake Project Management Committee (on behalf of licensee Alaska Energy Authority)
 - Chugach Electric Association
 - The Ketchikan Public Utilities
 - Copper Valley Electric Association
 - Southeast Alaska Power Agency
- Argued that current approach skewed the price because of small number of farms outside of Aleutian Islands

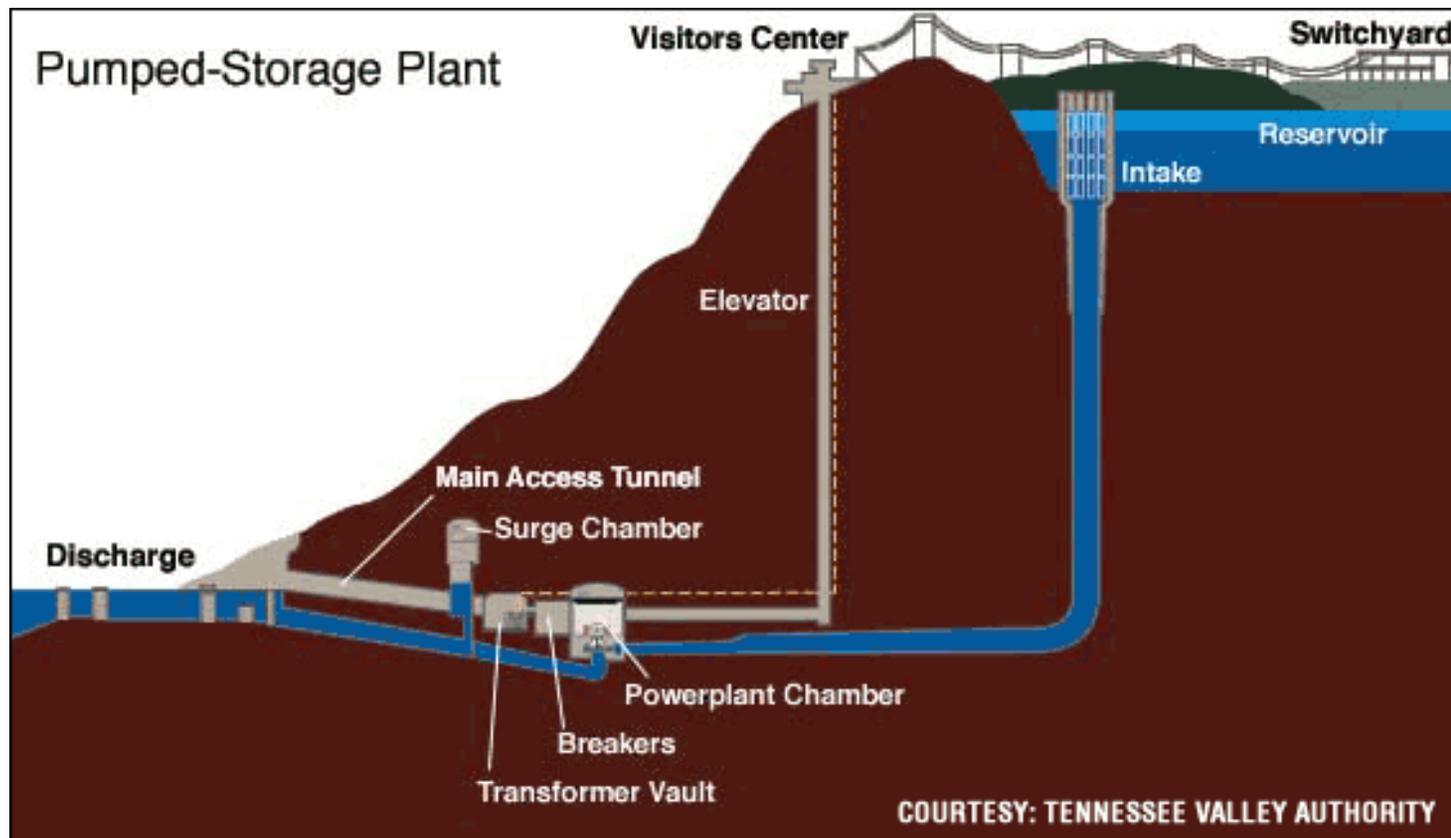
Notice of Proposed Rulemaking

- On August 17, 2017 FERC issues NOPR in Docket No. RM16-19 (160 FERC 61,004) proposing to adopt the use of a statewide average per-acre land value, rather than a regional per-acre land value
 - Each area of Alaska except the Aleutian Islands
- Driven by:
 - Prevalence of federal lands
 - Sparse farm acreage
 - Increase due to use of 2012 data
 - Larger data set will reduce fluctuations
- Expected to result in a reduced fee schedule
- “For Fiscal Year (FY) 2017, the use of a statewide average per-acre land value would result in a lower per-acre fee than that assessed in FY 2016. Accordingly, the 13 affected licensees would pay lower annual charge assessments for use of federal lands in FY 2017 than they did the previous fiscal year.”

SECTION 04

CLOSED LOOP PUMPED STORAGE

Overview of Pumped Storage



Benefits of Closed Loop Pumped Storage

- Dispatchable energy, providing benefits to energy markets and reliability
- Much lower environmental impact because water lost only to evaporation
- Can be used to store excess renewable generation; pairs well with existing variable resources
- Often built on existing disturbed sites, so little additional environmental challenges
- Not part of existing river flows, so less environmental impact to aquatic ecosystems

FERC Examples

- Eagle Mountain Pumped Storage Project (closed loop)
 - 12 to 18 hours of storage, with ramp rate of up to 20 MW per second
 - Built at a former mining site
 - 1,300 MW
 - 147 FERC 61,220 (2014)
- Iowa Hill Pumped Storage
 - 400 MW
 - 148 FERC 62,070 (2014)
 - Ultimately scuttled due to expense and possibility of other energy storage technologies
- Gordon Butte Pumped Storage Project (closed loop)
 - 400 MW
 - 157 FERC 62,196 (2016)

Biography



J. Daniel Skees

Washington, D.C.

T +1.202.739.5834

F +1.202.739.3001

J. Daniel Skees represents electric utilities before the Federal Energy Regulatory Commission (FERC) and other agencies on rate, regulatory, and transaction matters. He handles rate and tariff proceedings, electric utility and holding company transactions, reliability standards development and compliance, and FERC rulemaking proceedings. The mandatory electric reliability standards under Section 215 of the Federal Power Act are a major focus of Dan's practice. He advises clients regarding compliance with reliability standards, and helps them participate in the development of new standards.

Our Global Reach

Africa
Asia Pacific
Europe
Latin America
Middle East
North America

Our Locations

Almaty	Chicago	Houston	Orange County	Shanghai*
Astana	Dallas	London	Paris	Silicon Valley
Beijing*	Dubai	Los Angeles	Philadelphia	Singapore
Boston	Frankfurt	Miami	Pittsburgh	Tokyo
Brussels	Hartford	Moscow	Princeton	Washington, DC
Century City	Hong Kong*	New York	San Francisco	Wilmington



Morgan Lewis

*Our Beijing and Shanghai offices operate as representative offices of Morgan, Lewis & Bockius LLP. In Hong Kong, Morgan Lewis operates through Morgan, Lewis & Bockius, which is a separate Hong Kong general partnership registered with The Law Society of Hong Kong as a registered foreign law firm operating in Association with Luk & Partners.

THANK YOU

© 2017 Morgan, Lewis & Bockius LLP
© 2017 Morgan Lewis Stamford LLC
© 2017 Morgan, Lewis & Bockius UK LLP

Morgan, Lewis & Bockius UK LLP is a limited liability partnership registered in England and Wales under number OC378797 and is a law firm authorised and regulated by the Solicitors Regulation Authority. The SRA authorisation number is 615176.

Our Beijing and Shanghai offices operate as representative offices of Morgan, Lewis & Bockius LLP. In Hong Kong, Morgan Lewis operates through Morgan, Lewis & Bockius, which is a separate Hong Kong general partnership registered with The Law Society of Hong Kong as a registered foreign law firm operating in Association with Luk & Partners.

This material is provided for your convenience and does not constitute legal advice or create an attorney-client relationship. Prior results do not guarantee similar outcomes. Attorney Advertising.