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News from Washington DC that Impacts Energy Storage

2016 Community Storage Initiative Leadership Forum

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Minneapolis, MN

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Overview

- Information for you and your companies on:
- Federal Legislation
 - Done Deals
 - In progress, kind of.....
- Federal Regulations
 - DOE on a tear.....
- Building Codes / Standards
- Q & A

Federal Legislation that Impacts ES (1a)

- Consolidated Appropriations Act, 2016, PL 114-113
- 887 pages
- Signed into law December 18, 2015
- Extension of tax credits for renewable energy production (along with phase out dates)
- Extension of tax deductions or tax credits for energy efficiency
- **Big Deal!**

Federal Legislation that Impacts ES (1b1)

- Consolidated Appropriations Act, 2016 – Renewables
- Wind – Phase-out of production tax credit (2.3 cents / kWh) starts in for projects “under construction starting next year (2017)
 - 20% reduction in tax credit for projects starting in 2017
 - 40% reduction in tax credit for projects starting in 2018
 - 60% reduction in tax credit for projects starting in 2019, and no production tax credit for projects in 2020 onward
- Impact: Record # of wind project starts by 12/31/2016

Federal Legislation that Impacts You (1b2)

- Consolidated Appropriations Act, 2016 – *Renewables*
- Solar – Phase-out of 30% investment tax credit starts in for projects “under construction” starting in 2020
 - 30% tax credit for projects starting in 2016 - 12/31/2019
 - 26% tax credit for projects starting in 2020
 - 22% tax credit for projects starting in 2021 (and “placed in service” by 12/31/2023)
 - 10% tax credit for commercial projects in 2022 onward
- SEIA predicts **72 GW** of new solar PV from 2016-2020

Federal Legislation that Impacts You (1b3)

- Consolidated Appropriations Act, 2016 – *Renewables*
- Other technologies – production tax credit (1.2 cents / kWh) ends on 12/31/2016 for the following:
 - Open-loop biomass
 - Geothermal
 - Small Irrigation Hydroelectric
 - Landfill gas
 - Municipal Solid Waste

Federal Legislation that Impacts ES (1c1)

- Consolidated Appropriations Act, 2016 – *Efficiency*
- Small Business Expensing (Section 179)
- In 2014, \$25,000 with phase out starting at \$200,000
- 2015: \$500,000 with the phase out now starting at \$2.0 Million (“personal property” equipment)
- 2016: Both values indexed with inflation (if 2%, then \$510,000 with phase out starting at \$2.04 Million)
- Permanent extension (tax reform?)

Federal Legislation that Impacts ES (1c2)

- Consolidated Appropriations Act, 2016 – *Efficiency*
- Transportation – Alternatively Fueled Vehicles (AFV)
- AFV infrastructure: Tax credit of 30% of the cost (\leq \$30,000) per location in 2015 and 2016
- Tax credits for:
 - Fuel cell vehicles (2015 and 2016)
 - Electric motorcycles (2015 and 2016)
 - Electric vehicles (up to \$7,500 for 200,000 vehicles per manufacturer)

Federal Legislation that Impacts ES (1c3)

- Consolidated Appropriations Act, 2016 – *Efficiency*
- Residential
 - Energy Efficient New Homes - \$2000 to builders that make a 2015 or 2016 home 50% more energy efficient than IECC 2006
 - Existing home - \$500 Lifetime tax credit for efficiency upgrades for 2015 and until 12/31/2016
 - AFV Infrastructure – 30% tax credit up to \$1,000 for 2015 and 2016
 - Geothermal – 30% tax credit, no cap, expires 12/31/2016

Federal Legislation in Progress (1d1)

- Both the House and the Senate are working on comprehensive energy bills.
- HR 8 – On December 3, 2015, the US House of Representatives passed H.R. 8, the *North American Energy Security and Infrastructure Act of 2015*
- The vote was 249 to 174. Three Republicans voted against the bill, while nine Democrats voted for it.
- Energy production and energy efficiency sections.

Federal Legislation in Progress (1d2)

- S 2012 - The Energy Policy Modernization Act of 2015
- Passed out of the Senate Energy & Natural Resources Committee on a 18-4 vote last summer (bipartisan)
- Energy production and energy efficiency sections.
- Debated on the Senate floor in January and February of this year – then the Flint Michigan water crisis hit.
- Passed the full Senate, and voted to go to Conference with the House in July.

Issue 2 - Federal Regulations

Federal Regulations (2a)

- DOE has been very busy. 13 final rules last year, and they want to publish 13 final rules this year.
- Commercial Water Heaters: Proposed Rule published on 5/31/16. Comments are due August 1, 2016.
- Residential Water Heaters: Under EISA 2007, DOE was supposed to issue a decision (no new standard or NOPR) by April 15, 2016.
- Pool Heaters: Rulemaking in Process (test procedure finalized, and preliminary analysis released).

Federal Regulations (2b)

- DOE published their spring regulatory agenda for the rest of the year
- Many proposed and final rules scheduled for August and December, 2016
- Timing....

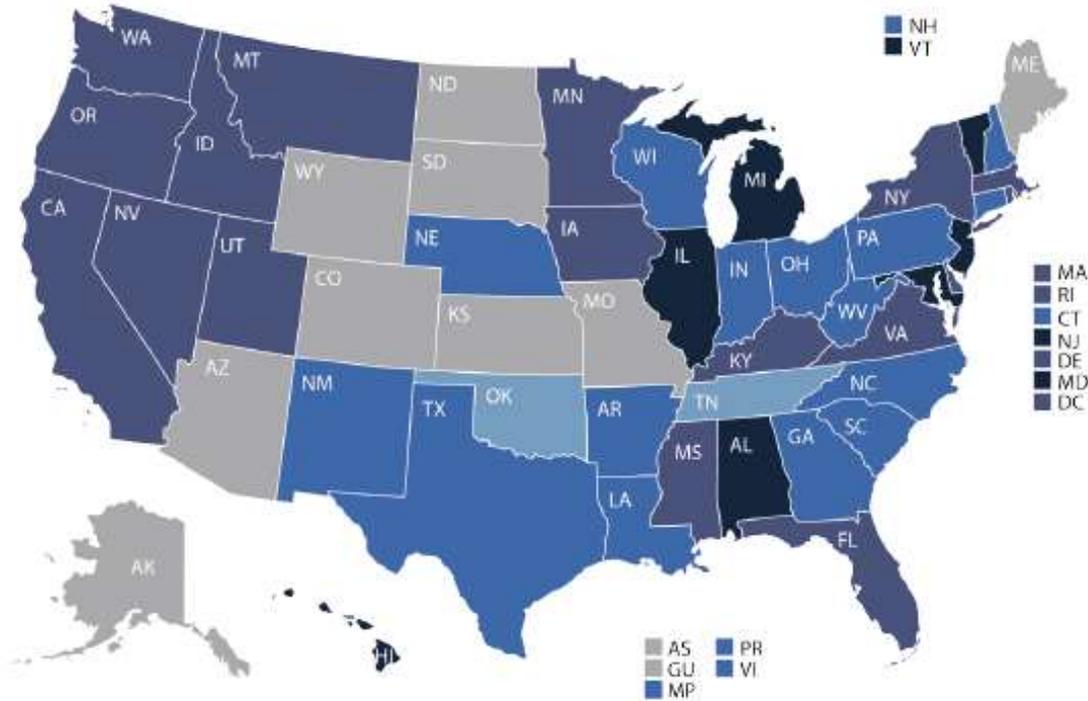
Issue 3 – Building Codes / Standards

Building Codes / Standards (3a)

- ASHRAE 90.1-2013 published in Oct. 2013
- DOE Final Determination published on 9/26/2014
- Under federal law, states have 2 years (until Sept. 26, 2016) to update codes to meet or exceed the energy efficiency provisions of the 90.1-2013 standard.
- Status of state commercial building codes as of February 26, 2016
- (source: <http://bcap-energy.org/code-status/commercial/>)

Building Codes / Standards (3b)

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Meets or exceeds ASHRAE Standard 90.1-2013 or equivalent (7)

Meets or exceeds ASHRAE Standard 90.1-2010 or equivalent (18)

Meets or exceeds ASHRAE Standard 90.1-2007 or equivalent (18)

Meets or exceeds ASHRAE Standard 90.1-2004 or equivalent (2)

No statewide code or predates ASHRAE Standard 90.1-2004 (11)

Building Codes / Standards (3c)

- ASHRAE 90.1-2016 will publish in October 2016
- They are working on the final changes to the standard
- Over 100+ changes have been made since 2013
- PNNL estimates site energy savings of 4.2% in the 2016 version compared to 2013 (as of June 2016)
- That could increase with some big proposals that are out for public review right now

Building Codes / Standards (3d)

- IECC – International Energy Conservation Code, 2018 version for Commercial Buildings
- Code change proposals published in early March
- **297** commercial energy code proposals, including proposals on Energy Storage.
- Code proposal hearings were held in Louisville at the end of April, 2016. Public comment hearings are in October in Kansas City.
- Who is going from your company?

Building Codes / Standards (3e1)

- **Big Issues (continued):**
- Should renewable energy production be treated the same as energy conservation in a code or standard?
- Should buildings be required to produce renewable energy?
- Should buildings be required to install wiring or piping infrastructure for future installation of renewable energy systems?

Summary

- 2016 is going to be a big year for appliance standard regulations at DOE.
- 2016 is going to be a big year for building energy codes for your new (and existing) buildings. A lot of final decisions will be made by October, 2016.
- Federal incentives for efficiency and renewables are locked in for 2016

Q & A

- The floor is open!

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