

2019 | THE ACADEMY
Public Power
Forward Summit



THE ACADEMY

AMERICAN PUBLIC
POWER ASSOCIATION

All In On Clean Energy

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Paul Zummo, Director, Policy Research & Analysis

American Public Power Association

pzummo@publicpower.org

202-467-2969

Agenda

- Defining our terms
- Renewable Portfolio Standards
- The existing clean energy landscape
- Public Power activity
- Other Issues

Defining our terms

- What do we mean by renewable?
- Non-Hydro renewables only?
- All renewables, including hydro?
- All non-emitting forms of generation?

100 Percent

- What does 100% mean?
- Doesn't necessarily (and it usually doesn't) mean all generation is renewable
- Unbundled REC purchases
- Could be an equivalency with peak load (If your peak is 50 MW you have 50 MW of renewable capacity)
- Large corporations – “matching”

Electricity industry making strides

- Across the country, the electric utility sector, including public power, continues to make great strides in reducing CO₂ emissions
 - Trending toward more renewables and gas; likely no new coal and fewer large nukes
- EIA has calculated that CO₂ emissions from the sector totaled 1,744 million metric tons in 2017 – lowest level since 1987
- Public Power: 33% reduction in CO₂ from 2005

State Renewable Goals

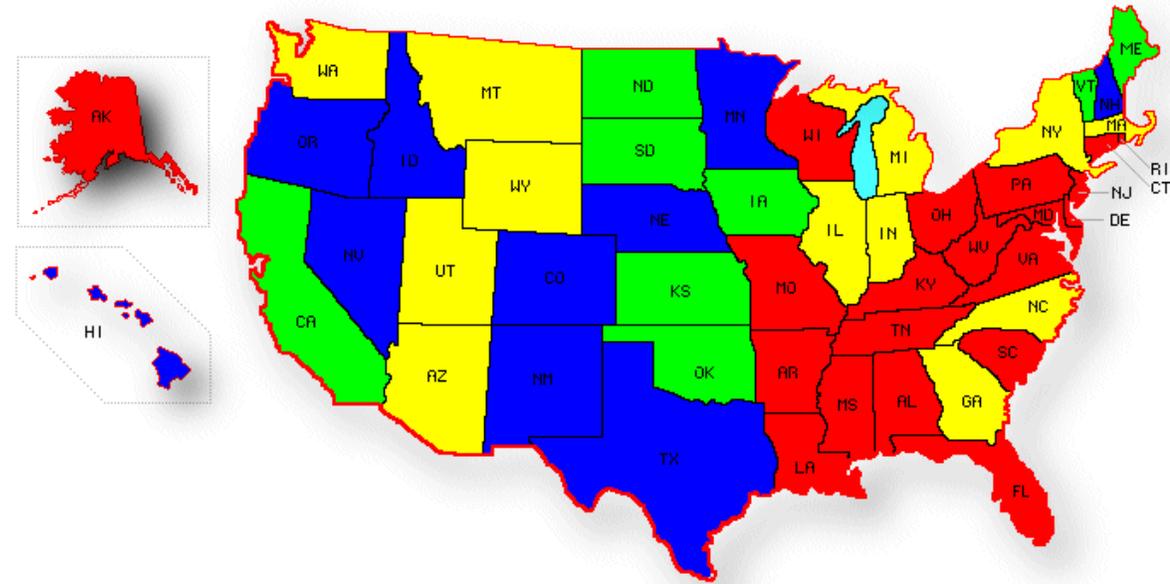
- 29 states plus DC have a renewable/clean energy mandate; 6 others with a goal
- California, Hawaii, Nevada, New Mexico, and New York have 100% renewable/clean energy/ zero net carbon/ emissions free goals by 2050
- At least 15 public power utilities with 100% goals
- Public power utilities have achieved 100% goals*:
Aspen, Burlington, Georgetown, Greensburg (KS), Rock Port (MO)

*: net 100 percent

Renewables – No Hydro

Share of Renewable Generation by State

- - <5%
- - 5-10%
- - 10-25%
- - >25%

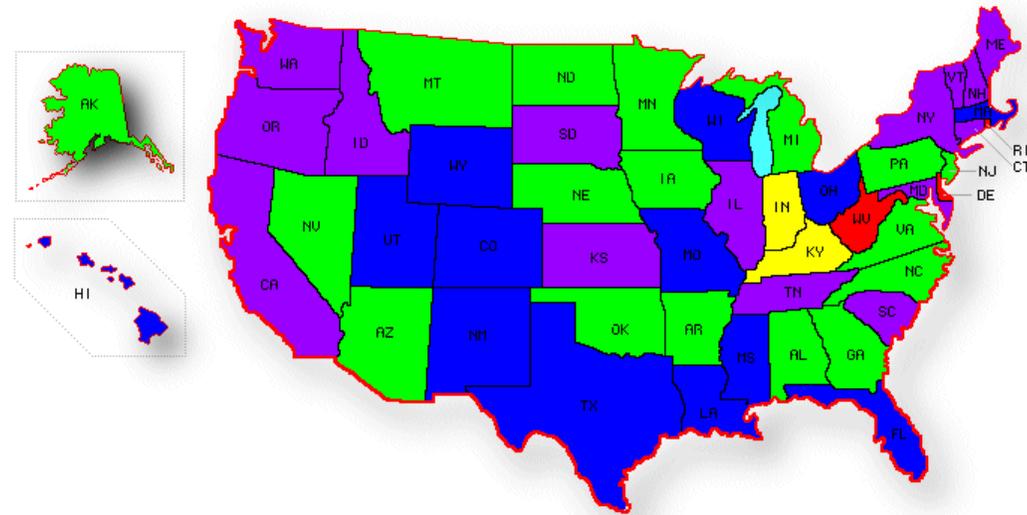


Source: diymaps.net (c)

Renewables + Hydro + Nuclear

Share of No-Emitting Generation by State

- <5%
- 5-10%
- 10-25%
- 25-50%
- >50%

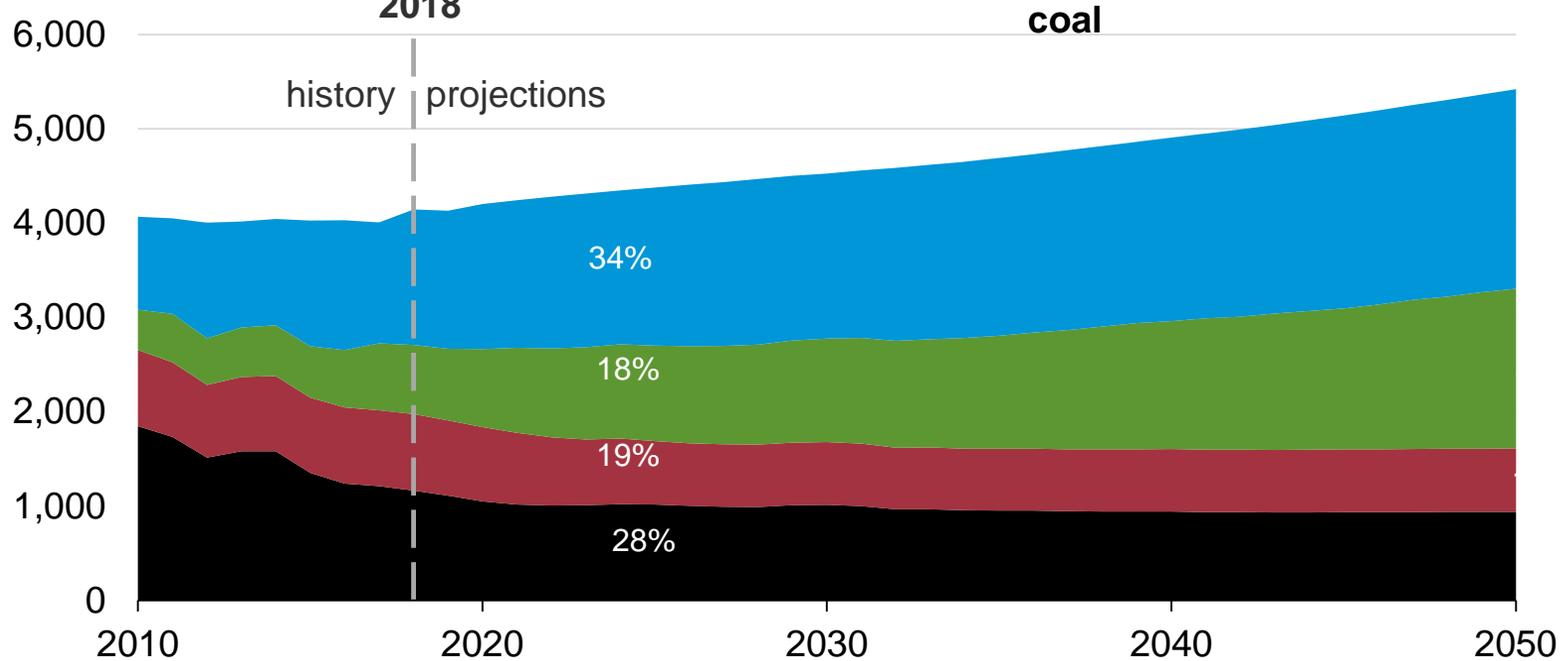


Source: diymaps.net (c)

EIA Projections

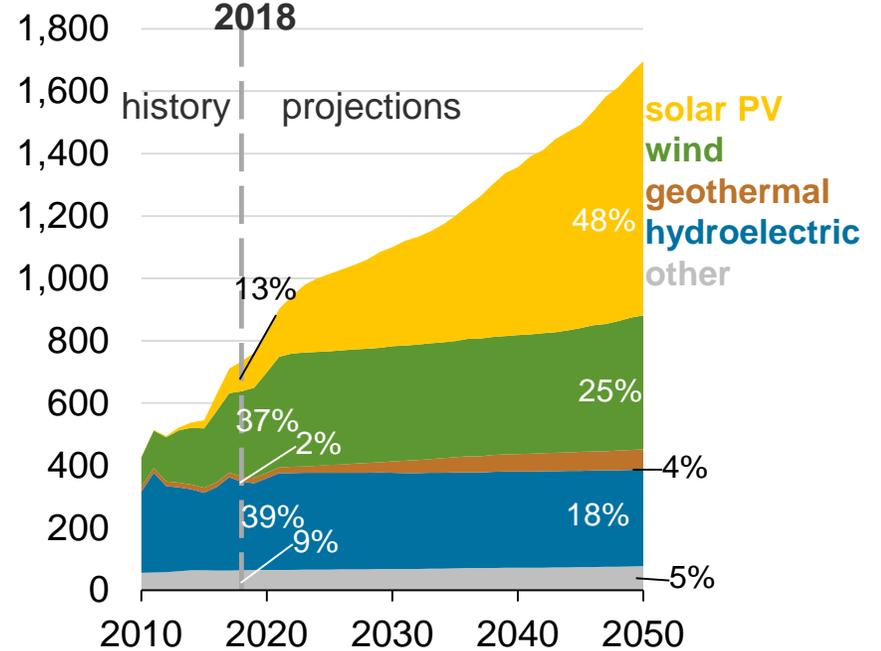
Electricity generation from selected fuels (Reference case)

billion kilowatthours



Renewable electricity generation, including end-use (Reference case)

billion kilowatthours



Source: Energy Information Administration Annual Energy Outlook 2019

What's public power doing?



A lot actually

- SRP: Over 300 MW invested in solar, 120+ MW wind
- Imperial Irrigation District: 300 MW community solar project for low-income customers
- LADWP: Over 1000 MW renewables contracts
- Omaha Public Power District: Over 150 MW wind
- CPS: 497 MW of solar
- And much, much more

Challenges for Public Power

- Tax credits do not apply to public power
- Generally have to enter into PPAs
- Full requirements?
- Finding the right partner
- Size

Public Power Partnerships

- Google purchasing output of new solar farms in TVA service territory – 300 MW
- Intel purchasing 100 MW of solar from SRP
- GRDA agreement with Google – latter receives 140 MW of 300 MW wind farm
- OPPD developed Rate 261M (high voltage rate) to help Facebook acquire 200 MW of wind project

Issues to Consider

- Balance between clean energy goals and rate impacts, especially in an era of low gas prices
- Clean energy goals must include nuclear and hydro – goals that exclude these technologies are not realistic
- Some areas of the country may need a longer glide path to a cleaner energy future
- Economy wide need for decarbonization – it's not just electricity (though it may be lowest hanging fruit)

Other Issues

- Need for transmission capacity buildout
- WEF report: “planned transmission build-outs would meet only 41 percent of corporate renewable energy demand in a high-procurement scenario, or 78 percent in a low-procurement scenario.”

Reality Check

“The idea [that] we're going to have by 2050 ... a 100 percent renewable system is not realistic ... It doesn't violate the laws of physics to do it. But that doesn't mean it is politically or economically implementable, and I think that is the issue.”

--former Energy Secretary Ernie Moniz

Conclusions

- What are we trying to accomplish: emissions reductions or promotion of certain resources?
- Can we live with 90%?
- Recognize that we have already accomplished a lot

Thank you!

Questions? Contact Paul Zummo at pzummo@publicpower.org