Regulatory Trends: Wins, Losses & Opportunities

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Distributed Wind

All States Summit

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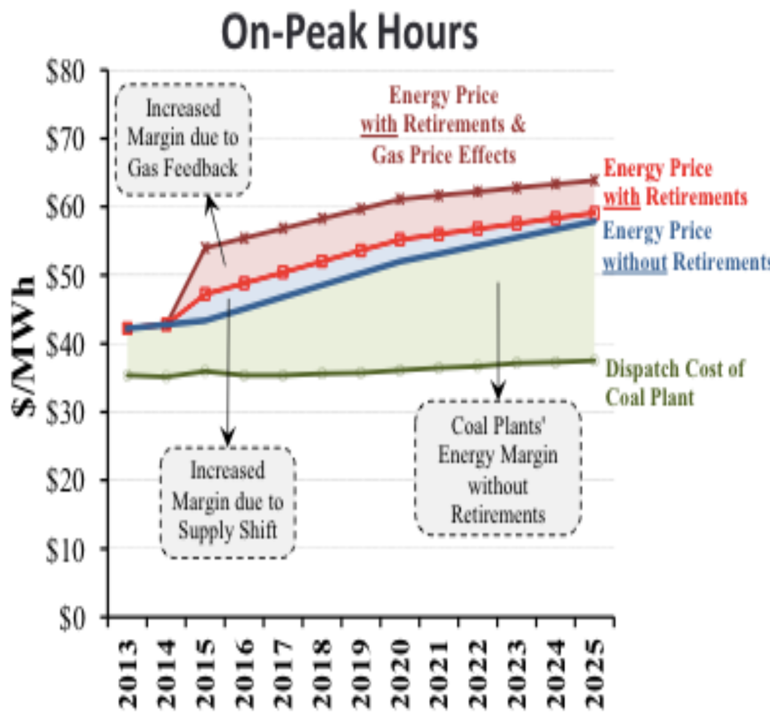
KEYES, FOX & WIEDMAN LLP

Major Trends

- Widespread Utility and Fossil Industry Backlash to RE
- Incremental and Sea Change Policy Reforms in key states
  - Second-Wave Utility Restructuring (NY, CA, MA)
  - Advanced Interconnection,
  - Customer Incentive &
  - Utility System & Customer Data Access
- New Drivers, New Revenue Steams
  - Carbon
  - Transmission & Distribution System Values
- Complementary Technologies, New Markets

Major Electric Sector Trends

- Electric Prices Expected to Rise
  - Air & Water Pollution Controls
  - Carbon Controls
  - Transmission Investment
  - Old Coal Plant Retirement
- Flat or Declining Demand
  - End-Use Efficiency
  - Distributed Generation
- Nervous Utility Managers
  - Impulse to resist EE & DG investment by customers



http://www.brattle.com/system/publications

The Mighty Have Fallen

_ Arch Coal Inc - NYSE

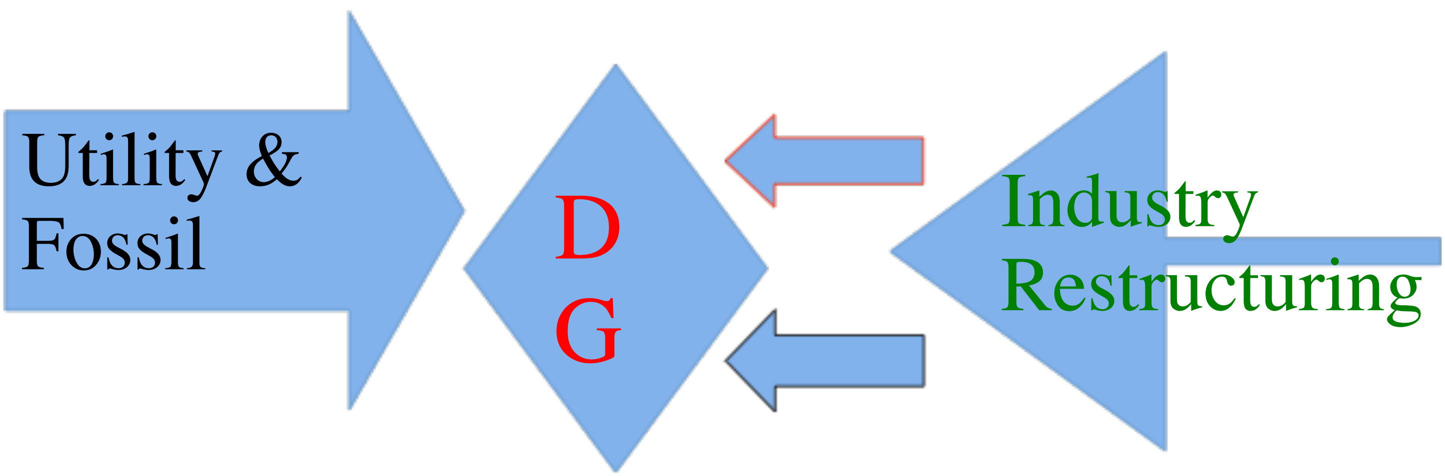
10/9/2014, 12:30 PM ET

Fundamentals

What has driven growth in Distributed Generation:

- Incentives/Rebates
- Net Metering
- Good interconnection Rules
- Tax Credits

Pressure from Two Directions



Distribution Open Access

- Respect & Enable Customer Choice
- Forecast and plan for DG growth
- Access to system information – where is it easy to interconnect, where is there capacity
- Interconnection Costs = utility service
  - Not charged to the customer

Recent Wins

- Indiana FEED-In Tariff http://www.indianadg.net/about/contact-us/)
- South Dakota – reject (for now) customer charges
- Mississippi: study shows DG net benefit – could lead to NEM policy
- Utah: rejected NEM customer charge
- Iowa: 3rd Party ownership – Leasing model
- Ohio: improved interconnection procedures

Recent Wins

- CO:
  - 20% RPS expanded to Coops & Muni's
  - .75- 1% DG Carve-Out: half to be met with retail distributive generation)customer site of facilities)
- Illinois and Maryland increased incentives for distributed wind in 2013.
- Net metering caps raised in Nevada, Vermont, Minnesota and NY last year
- FL – Property Tax Exemption added
- SC – Becomes 44th state with NEM policy

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Recent Losses

- Arizona: rejected APS big NEM customer charge – imposed $4 monthly charge
- KS - Loss of annual rollover
- OK - Net Metering Customer Charge
- LA - Tax Credit removed
- New Hampshire - adverse changes to rebate level

Key Near Term Policy Plays

State Specific

- NY:
  - Net metering cap
  - REV
  - Extend Property Tax Exemption
  - Permitting
  - Sales Tax Exemption
- CA:
  - Distribution Planning
  - NEM Policy
- CO: Implement DG Care-out
- HI:
  - Higher FIT rates
  - Increase feeder limits
  - Distribution planning
  - State tax credit
- IA:
  - Distributed Wind Tax Credit
  - DG Carve-out
  - NEM for REC's and Muni's
- WI:
  - Customer Charges

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Key Near Term Policy Plays

All States

- Carbon Standards Implementation
- NEM battles
- Interconnection Reforms
- IRP & Coal Plant retirement
- Community Wind

Federal/Regional

- USDA & Rural
- CAA

How Can A Carbon Pollution Standard (CPS) Advance Wind?

Three ways a CPS could help wind energy growth:

- Procurement: Utilities will look more closely at zero emission options
- Encourage expansion of policy supports
  - States will likely be able to take some credit for policies to expand wind generation
  - CPS is a strong new reason not to weaken existing policies
- If states choose to allow RE to count toward compliance:
  - New wind systems could earn emission reduction credits

Carbon Value

If carbon credits trade at $20/ton:

new

Emission Reduction Credit Value

M x 8760 x Γ = annual solar generation

T x P = $/MWh revenue to solar owner from CO2 Emission reduction credit

Σ x T x P = annual revenue to renewable DG owner

Where: M is installed capacity of solar in MW

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States Will Make Key Decisions

- States will have major role in design of compliance options & implementation
  - Air Quality Regulators & Utility Commissions
- Poorly designed emission controls could:
  - Exclude renewables from compliance systems
  - Adversely affect existing voluntary REC markets
  - Deprive system owners of CO_2 reduction claim in corporate claims and green marketing
  - Limit award of allowances to utility owned wind systems
  - Disqualify behind-the-meter wind from compliance market

Conclusions

- We are in a period of dynamic change in electric sector
- Investment climate for wind will depend on out-come of key policy battles (federal and state)
  - Expect legislative attacks on NEM in many states
  - policy improvement possible

➢ Supportive clean energy policies are the result of decades of work

➢ In the next few years advocacy at state level will be critical

Extra Slides – Response to Questions

- Interconnection
- Net Metering
- Permitting
- Contracts
- Transmission
- Rate Design
- Utility Regulation
- Storage & Demand Response
- Emission & Renewable Energy Credits

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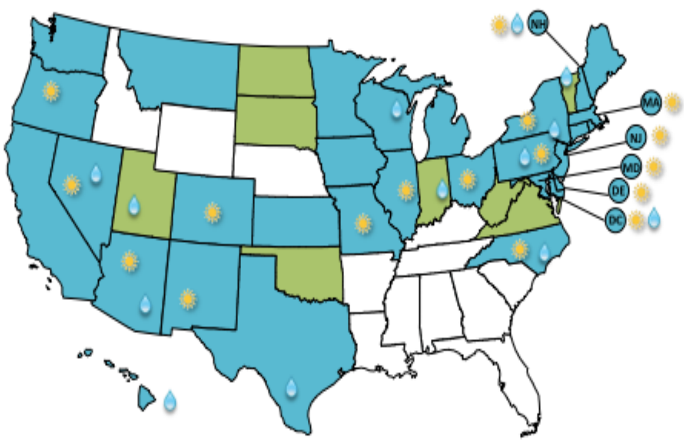
Renewable Portfolio Standards



29

STATES +
D.C. + 2 TERRITORIES
HAVE RENEWABLE PORTFOLIO STANDARDS

8

STATES +
2 TERRITORIES
HAVE RENEWABLE PORTFOLIO GOALS

CARVE-OUT PROVISIONS

17

EXTRA CREDIT

8 *

FOR SOLAR OR CUSTOMER-SITED RENEWABLES

NO RENEWABLE STANDARD OR GOAL AT ALL

12

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State Property Tax Incentives

33 States + Puerto Rico offer property tax incentives for solar projects

- Property tax incentive
- Local option for property tax incentive
- State property tax incentive and local option for property tax incentive

Source:

KEYES, FOX & WIEDMAN LLP

September 2013

State Income Tax Incentives

22 States
Offer tax credits
for solar projects

- Incentives for residential and commercial projects
- Incentives for commercial projects
- Incentives for residential projects

Source:

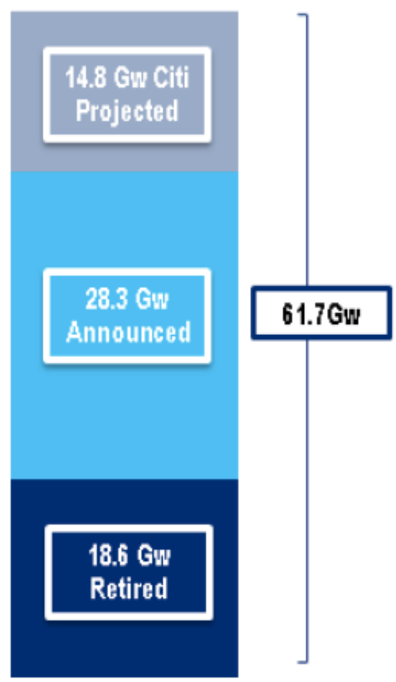
KEYES, FOX & WIEDMAN LLP

September 2013

Regulatory Context

- Carbon Standards are latest in series of new power plant controls
- Mercury Air Toxics rule (MATS)
- Cross State Air Pollution Rule (CSAPR)
- Tighter national ambient Air Quality Standards for PM, SO2, O3

Figure 1. Coal Retirements 2011-2020



Source: Citi Research

Questions - Uncertainties

States

- PA & FL – Governor Elections
- Carbon standards

Federal

- Carbon standards
- Tax