Reducing Greenhouse Gas Emissions

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Environmental Policy

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About PacifiCorp

- 1.5 million customers
  - Oregon, Utah, Wyoming, Washington, Idaho and California
- Owned by ScottishPower
- 8,200 MW of power generation
  - Predominantly coal
  - Growing gas portfolio
  - Push for more renewables

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About Regulated Utilities

- We are obligated to serve customers reliably and as cost-effectively as possible
- As a monopoly, we are overseen by public utility commissions
- As a result, most of our actions require approval by PUCs for cost recovery
- Thus, we cannot act unilaterally without PUC approval
    - This makes us different from many companies in setting internal policies

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The ScottishPower Connection

- Our UK colleagues face real regulations on greenhouse gas emissions and renewable energy
  - Lots of thought and work going into reducing emissions in the generation fleet and tracking policy developments in UK and European Union
- In the US, we face federal disinterest and mild state interest in tackling emissions
  - U.S. Congress moving slowly
  - Oregon and Washington have plant siting laws
  - Other states, such as California and Massachusetts, are setting limits on vehicles and power plants
- Nevertheless, climate change can translate into financial risk since regulations can materialize in the future
  - The UK experience shows that even after 2 decades of Thatcher and Major, regulations can suddenly happen when you least expect it!

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Our Climate Strategy

- Planning
  - Incorporate carbon risk value in our resource modeling
- Procurement
  - Apply carbon risk value to bid evaluations in our RFPs for new generation
- Accounting
  - Joined California Climate Action Registry
- Policy
  - Support well-crafted policies that mitigate emissions growth
    - Renewables
    - Efficiency
    - Offsets
    - GHG Accounting

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Incorporating Climate Change into Planning

- Integrated Resource Plan: 10-yr, least-cost plan
- We included $ adders for CO_2 plus NO_x and SO_x
  - CO2 is a challenge since there are virtually no regulations to reference
  - Worries that a wrong estimate could lead to financial penalties from our regulators
    - But is the alternative - $0/ton - better? We thought "no"
  - Extensive process - consulted experts, environmental representatives, internal managers
  - Settled on $8/ton of CO2 starting in 2009

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Clean Energy in Our 10-Year Procurement Plan

- 4,000 MW of new resources
  - 1,400 MW of renewables (wind, geothermal)
    - 340,000 homes
    - Will require "learning by doing" for integrating intermittent wind into our grid
  - 450 aMW of energy conservation
    - 330,000 homes
  - Other resources will be fossil fuel
    - Balance between minimizing environmental risk and providing low-cost power to customers
- Contingent on bids from developers that meet our price requirements

Comments on the Plan

- “…the most sophisticated and most consequential IRP that has been prepared in the region in the last five to 10 years.”

  - Natural Resources Defense Council

- “This is one of the most impressive integrated resource plans I've seen."

  - Oregon Office of Energy staff

- “PacifiCorp is really leading the way.”

  - Renewable Northwest Project

- Everyone (environmentalists, industrial customers, etc.) recognizes elements they do not prefer in the plan - which probably means we’re doing something right...
- The commenters above recognize that a plan does not equal implementation - we all have a lot more work to do...

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Tracking emissions

- Important to establish common rules on counting GHGs
  - Avoid accounting games
  - Helps build a foundation for early action credit and offsets
- We currently report GHG emissions in Environmental and Social Impact Report
  - http://www.scottishpower.plc.uk/pages/aboutus_environment
- We have joined the California Climate Action Registry
  - Derived from WRI/WBCSD standards, CCAR should reflect emerging global norms for GHG accounting
  - Registry to focus on both owned generation and purchased power
  - Currently working together to set detailed rules on data certification, emissions factors, T&D losses, etc.

Support Policies

- Supported a proposed federal renewable portfolio standard, requiring 10% of power to come from renewables in 2020
- Supported federal energy efficiency standards for appliances and equipment
- Engaged in West Coast Governors’ Global Warming Initiative
  - Concerned about push for state-mandated CO_2 limits
  - States ideally positioned to incent new, clean supply
  - CA, OR, and WA should share best practices
    - Regional Renewable Portfolio Standard?
    - Common efficiency standards?
    - Transportation pilots?
    - GHG Accounting?
    - Siting standard?

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Challenges Are Stiff

- Demand for electricity is rising dramatically
- Supply trends are ambiguous
  - Long-term natural gas supply in question
  - Plentiful, low-cost coal available
  - Cost of wind has dropped dramatically
    - But will new wind farms be permitted by weekending urban liberals?
  - Are we facing a coal-renewables future?
- We see little national leadership
  - Many utilities are interested in policy certainty
- There's a need for further development of technology
  - Utilities typically underinvest in R&D
  - Federal government sending discouraging signals on willingness to deploy technologies in the marketplace

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Other Utility Approaches

American Electric Power

- Largest CO_2-emitting utility in the US
- Faced intense pressure from shareholder groups, environmental groups, and now state AGs on criteria air emissions and greenhouse gas emissions
- Produced a study of McCain-Lieberman's impact on costs – proprietary modeling tool to weigh resource options
- Committed to "proactive" advocacy of "positive policy options", including support for McCain-Lieberman
- Determined that modest GHG reductions can occur over coming years
- Reductions do not change investment plan to conventional pollutants
- Actively pursuing IGCC for its next round of coal investment

Texas Utilities

Shareholders generally would be well served by reducing carbon dioxide.

- The time value of money and the likelihood that there would be sufficient time to adopt cost-effective measures
- The likelihood that costs incurred in advance of mandatory controls would be absorbed by shareholders
- The possibility that later advances in technology will reduce the cost of reducing carbon emissions
- The current inability to target its activities to reflect the specific requirements
- The inability to use the flexibility of the cap-and-trade program
- The danger that early actions would decrease the number of initial allowances, effectively penalizing the company and its shareholders

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For More Information

- Environmental and Social Impact Report
  www.scottishpower.com/pages/aboutus_environment
- Integrated Resource Plan
  www.pacificorp.com/Navigation/Navigation23807.html

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