How Corporate America Is Taking On Climate Change & Driving Green Markets

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SPEAKERS

Moderator
- Lily Chinn: Managing Partner SF Bay Area, Katten

Panelists
- Ruth Ann Castro: Senior Corporate Counsel, Google
- Judith Kim: Senior Counsel, EDF Energy
- Marjorie Tsang: Institutional Investors
AGENDA

- Legal and Regulatory Landscape
- Corporate America’s View of Renewable Energy & Sustainability
- Introduction To Different Paths To Corporate “Greenness”
- Google Data Center Energy Case Study
- Institutional Investors’ Perspectives
KEY HIGHLIGHTS OF THE LEGAL & REGULATORY LANDSCAPE

- **International**
  - US withdrawal from the Paris Climate Accord

- **Federal**
  - Withdrawal of the Clean Power Plan regulations
  - Tariffs on imported solar panels
  - DOI support for offshore wind leases

- **State**
  - California Bill re Zero Carbon, 100% Renewable Energy by 2045

- **Local**
  - [https://www.epa.gov/statelocalenergy/local-government-strategy-series](https://www.epa.gov/statelocalenergy/local-government-strategy-series)
CORPORATE AMERICA’S BUSINESS & LEGAL CASE FOR SUSTAINABILITY

- Risk Management
- Market Competiveness
- Economic / Tax Incentives
- Regulatory Structure
- Consumer Demands
- Policy Concerns
EXAMPLES OF HOW CORPORATE AMERICA IS DRIVING GREEN MARKETS

- Renewable Energy Offtake Agreements
- Renewable Energy Credits (RECs)
- Carbon Offsets
- Emissions Allowances
- Sustainable Real Estate Development (e.g., green building, LEED certifications)
Google Data Center Energy Case Study
Electricity is the largest component of data center opex.
6.2 terawatt hours in 2016 (Alphabet)

That more than the annual usage of the city of San Francisco.
26 deals and >3GW since 2010
Largest Corporate Purchaser of Renewable Energy

Cumulative Corporate Renewable Energy Purchasing in North America, Europe, Mexico
May 2018

Source: Bloomberg New Energy Finance  *Google total also includes one 80 MW project in Chile
What do we mean by “100% renewable”?

Google will buy, on an annual basis, the same amount of MWh of renewable energy as the amount of MWh of electricity that we consume for our operations around the world.
Power Purchase Agreements (PPAs) in Regulated Markets

1. Renewable Generators
   - MWh + RECs

2. Electricity Market
   - MWh
   - Renewable energy credits (RECs)
   - Electricity
   - Bundled energy + RECs

3. Google Data Center
   - MWh

4. Google
   - RECs
Beyond 100% Renewable

New Goal: work to power our operations on a region-specific, 24-7 basis with clean, zero-carbon energy

1. Regional approach to renewables
2. Pursuing energy supply solutions that advance 24-7 clean energy
3. Promote energy policy that accelerates the transition to 24-7 clean energy
IMPACT OF INSTITUTIONAL INVESTORS ON DEVELOPMENT OF GREEN MARKETS

- Who are institutional investors?
- How have they responded to the risk from climate change?
- Criteria for green investments
- Effect on publicly traded companies
- Impact of federal, state and local energy policy and regulations
QUESTIONS?