The Effects of Shifting Policies and Market Conditions for New Generation

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Historically renewable energy projects, which need relatively large upfront capital, arrange financing that aligns with their:

- Large tax benefits (ITC, PTC, accelerated depreciation)
- Relatively predictable electricity generation
- Long-term power contracts.

Tax equity, sponsor equity, and lenders fund projects based on these benefit streams.
Recent Financing Developments

- **Shorter-term contracts**
  - Driven in part by the increase in corporate PPAs and shorter-term PURPA contracts
  - Financeable due to belief that wholesale prices will remain steady or increase in large parts of the country

- **Risk-transfer products**
  - Fixed-for-floating contracts
  - Proxy revenue swaps
  - Financeable because hedge providers have a better understanding of risks and characteristics of renewables
Tax Credits Are Phasing Down/Out

- Tax credits for renewables are set to phase down over the 6 years, reducing the funding provided by tax equity providers.
  - In 2017, tax equity contributed a smaller percentage due to the reduction in corporate tax rate.
RPS Changes Ahead

- Renewable Portfolio Standards (RPS) in the vast majority of states will stop increasing over the next 5 to 10 years.
  - In these states, new RE will solely rely on market forces.
  - RPS legislation has historically been the primary driver of renewable deployment, though this has changed recently as wind and solar have become cost-competitive with traditional sources of energy generation.
- Large states, with huge electricity load, such as California, New York, and New Jersey, have recently increased their RPS targets to 50% or higher over the next 10 to 30 years.
  - In these states, utilities will be mandated to continue to increase their renewable electricity sales.
Financing Changes

• In a competitive marketplace, with no/low tax credits, renewables might be financed like a CCGT plant:
  – Short-term PPAs are hedges
  – Large 5 to 7 year loans with low amortization and balloon payments due at maturity.
  – If the plant maintains its value the project is refinanced.
    ● May need to firm power through storage to maintain value in the future.
  – Due to the increased risks (e.g. no tax credits, shorter contracts) debt and equity rates would likely be higher, however would have higher leverage.

• In markets with high RPS targets, both suppliers and utility-providers will likely benefit from long-term contracts.
  – Longer-term contracts and no/low tax credits could mean a significant portion of capital coming from longer term, less expensive debt.