Quantifying the Value of the Section 1603 Treasury Cash Grant to Community Wind Projects

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Presentation Overview

1) Pre-Stimulus: Federal Wind Incentives are Tax-Based

- PTC and Accelerated Depreciation
- Graphs of tax benefit streams both with and without tax appetite

2) Post-Stimulus: Cash Is (Almost) King

- 30% Cash Grant (in lieu of PTC) and Accelerated Depreciation
- Graphs of cash/tax benefit streams both with and without tax appetite

3) Comparison of Pre- and Post-Stimulus Value

4) Additional or "Ancillary" Benefits of Cash Grant

5) Conclusions

Prior to the Recovery Act of 2009: Federal Wind Incentives Are Tax-Based

1) Production Tax Credit (PTC):

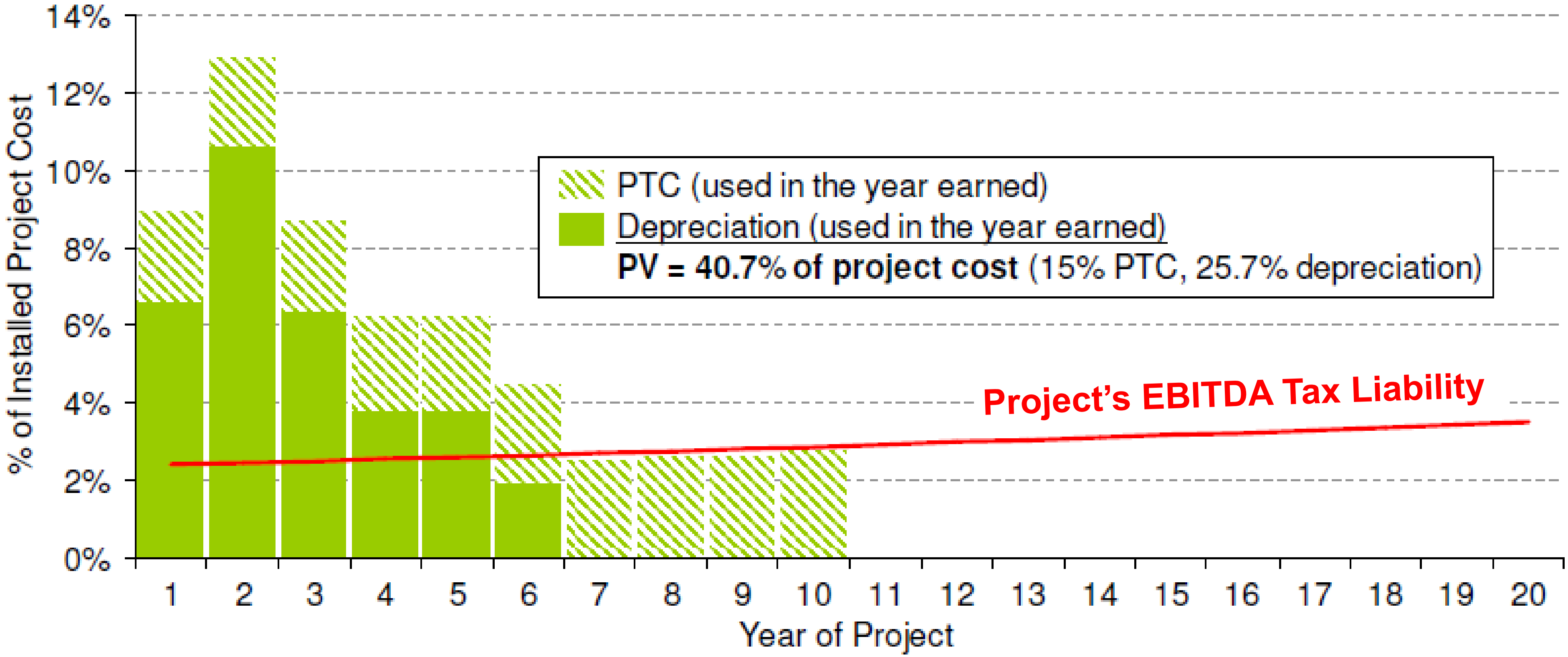
- $/MWh income tax credit in place during first 10 years of project's life
- Inflation-adjusted value of $22/MWh in 2010
- For a "typical" community wind project with an installed cost of $2500/kW and a 30% capacity factor, the present value of the PTC amounts to 15% of total project costs (at a 10% nominal discount rate)

2) Accelerated Tax Depreciation:

- Up to ~95% of total installed costs can be depreciated using a 5-year schedule (creates net operating losses in early years of project)
- Present value of depreciation deductions equals 25.7% of installed project costs (only 6.8% of which is due to acceleration)

PV (PTC + depreciation) = ~41% of installed project costs
(but this assumes efficient use of tax benefits!)

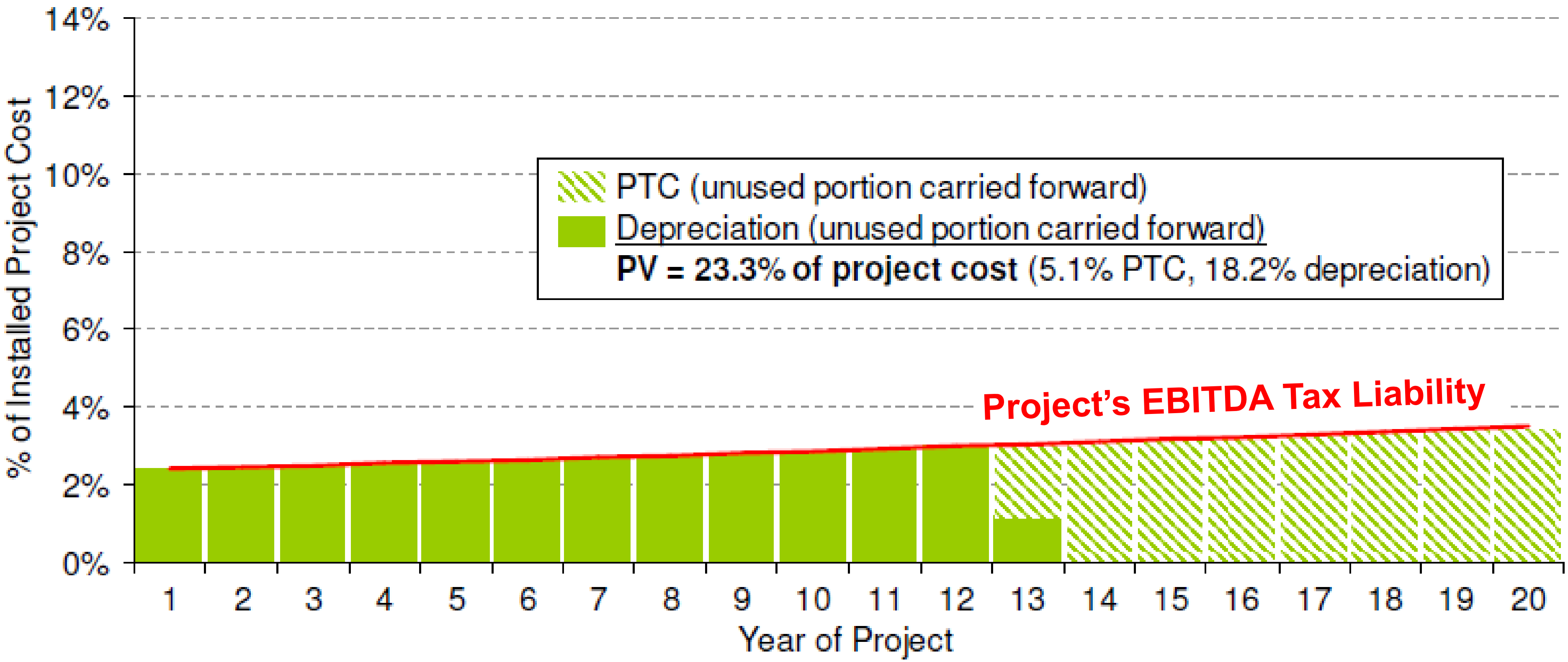
If Owners Have Tax Appetite: Tax Benefit Stream is Front-Loaded



Tax benefits exceed project's ability to use them during first six years; additional tax capacity from outside of project needed for efficient use

- Some (relatively few) developer/owners may have outside tax capacity
- Others can seek third-party tax equity investors (but at a cost)

If Owners Do Not Have Tax Appetite: Tax Benefit Stream is Back-Loaded



Passive credit & loss limitations restrict ability of passive investors to apply excess credits/losses against outside (i.e., non-project) income:

- Excess credits and losses can only offset other passive income
- Passive income does not include wages, interest, or dividends

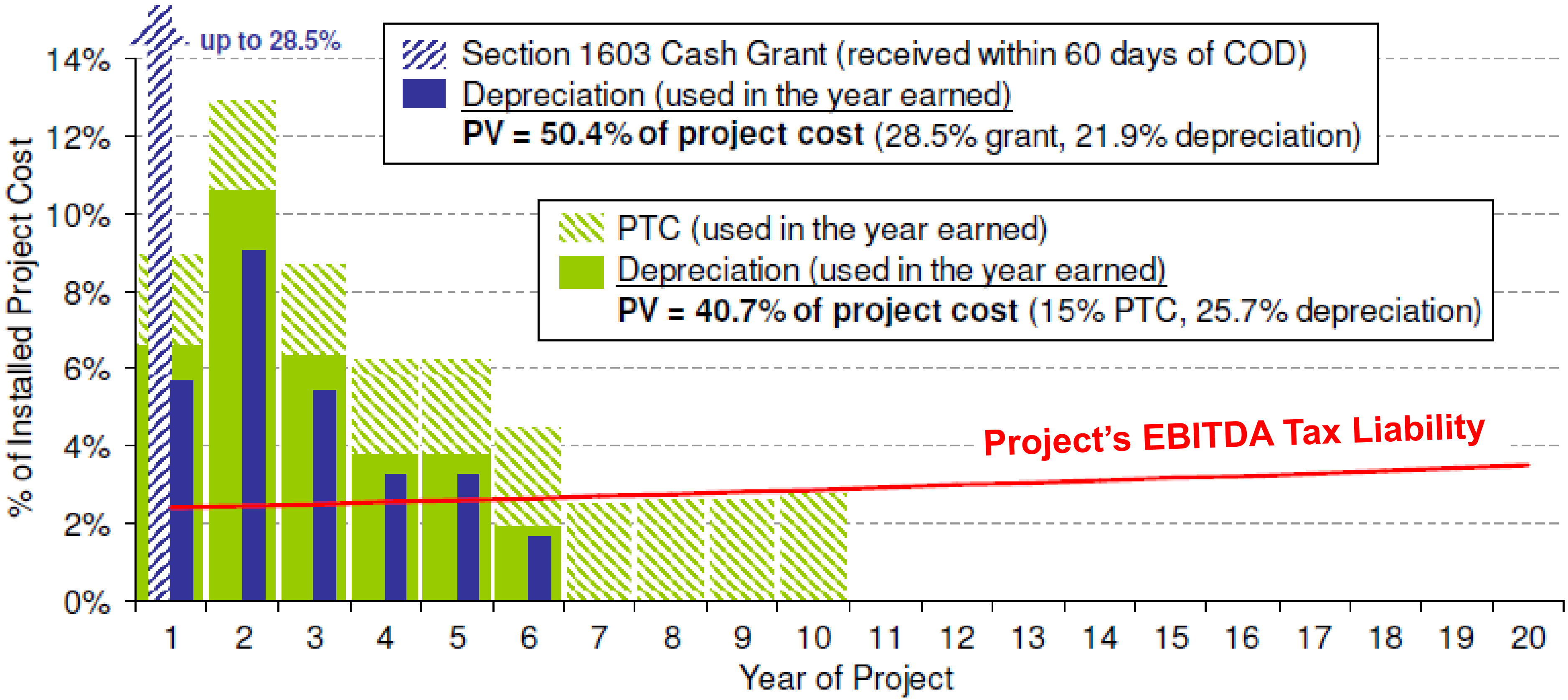
After the Recovery Act of 2009: Cash Is (Almost) King

- **February 2009:** Among many other things, the *American Recovery and Reinvestment Act of 2009* (the "Recovery Act") allows wind projects to **temporarily** choose between the PTC, a 30% investment tax credit ("ITC"), **or a 30% cash grant**

- The cash grant is good news for projects that don't have tax credit appetite (e.g., many community wind projects)

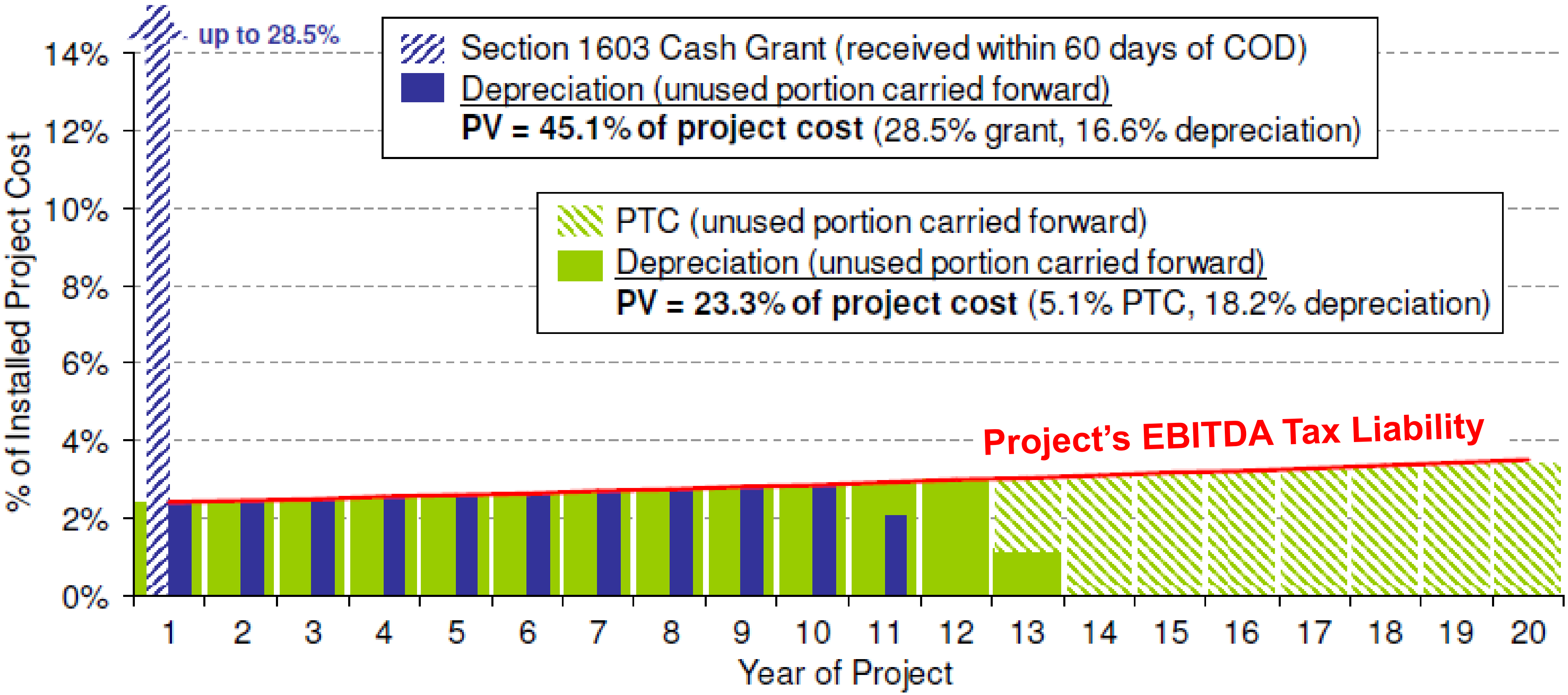
- ***BUT*** some tax appetite is still required for efficient use of depreciation deductions…

If Owners Have Tax Appetite: Choice Influenced by Cost/Performance



- Grant provides more value than PTC to projects that cost more and/or generate less (e.g., typical community wind project?)
- Depreciation still exceeds project's tax capacity in years 1-5

If Owners Do Not Have Tax Appetite: Choice of Grant a "No-Brainer"



Replacement of a long-delayed PTC with an up-front cash grant (that is ***not*** subject to passive credit limitations) provides significant time value that will overwhelm cost/performance considerations

Comparison of Four Scenarios Shows Substantial Benefit to Community Wind

- **Projects with Tax Appetite:** Though positive (+9.7%) in this example, the relative value of the grant may be positive or negative, depending on project cost and performance (will be positive for most community wind projects)
- **Projects without Tax Appetite:** Grant provides significant time value benefits that will overwhelm project cost and performance considerations (+21.8% total)
- In this example, the project without tax appetite fares better under the grant (45.1%) than does the project with tax appetite under the PTC (40.7%)

Incentive?	Tax Appetite? Yes	Tax Appetite? No
PTC	40.7%	23.3%
Grant	50.4%	45.1%
Relative Value of Grant:	+9.7%	+21.8%

The Section 1603 30% Cash Grant Also Provides Additional Benefits

	PTC	30% ITC	30% Cash Grant
Alternative Minimum Tax (AMT)	The PTC is exempt from the AMT for just the first 4 (of 10) years	The 30% ITC is fully exempt from the AMT; The AMT is not applicable to 30% cash grant	
Haircut for Government Grants	The PTC is reduced by gov't grants applied to capital costs	The 30% ITC/Grant is reduced only by gov't grants that are not taxed as income (use of grant does not matter)	
Haircut for Subsidized Financing	The PTC is reduced by gov't-subsidized low-interest loans	The Recovery Act eliminated this haircut for the 30% ITC/grant (but not for the PTC)	
Owner/Operator Requirement	The owner must also operate the project to qualify	No such requirement – enables leasing	
Power Sale Requirement	Power must be sold to an unrelated person to qualify	No power sales requirement for the ITC/grant (this benefits behind-the-meter projects)	
Performance Risk	Underperformance reduces both cash revenue *and* PTCs	Underperformance only reduces cash revenue (does not impact the 30% ITC/grant)	
Passive Credit/Loss Limitations	Individuals who are passive investors can only apply the PTC and ITC (and losses) against passive income		30% cash grant not subject to passive credit limitations
Securities Regulation	PTC and ITC do not provide cash with which to capitalize the project (i.e., do not reduce # of shares)		Grant may reduce number of investors/shares needed

The value of some of these ancillary benefits is explored in a January 2010 report titled "Revealing the Hidden Value that the Federal Investment Tax Credit and Treasury Cash Grant Provide to Community Wind Projects" (http://eetd.lbl.gov/EA/EMP/reports/lbnl-2909e.pdf)

Modeling Results (from Jan 2010 LBNL report) for 1.5 MW Behind-the-Meter Project

Step	Scenario	20-Year After-Tax IRR Target of 12%		$120/MWh First-Year Revenue (with 2% inflation)	
		First-Year Revenue	20-Year Levelized Revenue	20-Year After-Tax IRR	20-Year After-Tax NPV
1	No PTC	$154.4/MWh	$176.6/MWh	8.7%	-$246k
2	30% ITC	$110.0/MWh	$125.8/MWh	13.2%	+$484k
3	30% Cash Grant	$108.5/MWh	$124.1/MWh	13.4%	+$505k
	Step 3-Step 1:	**-$45.9/MWh**	**-$52.5/MWh**	**+4.7%**	**+$751k**

- Primary benefit is ***access***: behind-the-meter projects cannot access the PTC (no power sale), but can access the ITC/grant
- Can measure the value of the 30% ITC/grant in two ways:

  1) Assume a 12% IRR target and measure the impact on required revenue
     - **Grant reduces revenue requirements by ~$50/MWh**

  2) Assume $120/MWh revenue and measure impact on IRR and NPV
     - **Grant increases IRR by 4.7%, NPV by $751k**

Conclusions

- **The Section 1603 cash grant provides significant value to wind projects, and in particular community wind projects**
  - Projects without tax appetite benefit the most
  - Consider face value *and* ancillary benefits
- **Wind has received 87% of the >$3.6 billion in grants that have been awarded to date**
  - 6200 MW (62%) of all new wind capacity built in 2009 chose the grant
  - But <2% of that 6200 MW might be considered community wind…
- **Window of opportunity is short…unless extended**
  - Projects must begin construction by end of 2010, and be online by end of 2012, to qualify for the grant
  - Efforts to extend the program (perhaps in an altered form) are underway, but face uncertain prospects
- **Don't miss this opportunity!**

Appendix: Wind Project Assumptions Used for the Benefit Stream Graphs

- **COD:** January 1, 2010
- **Nameplate Capacity:** 10 MW
- **Installed Cost:** $2,500/kW
- **Capacity Factor:** 30% net
- **EBITDA:** $65/MWh
- **Depreciation:** 95% 5-yr MACRS
- **Income Tax Rates:** 35% (federal only)
- **Discount Rate:** 10% nominal
- **Inflation Rate (for PTC):** 2%/year