

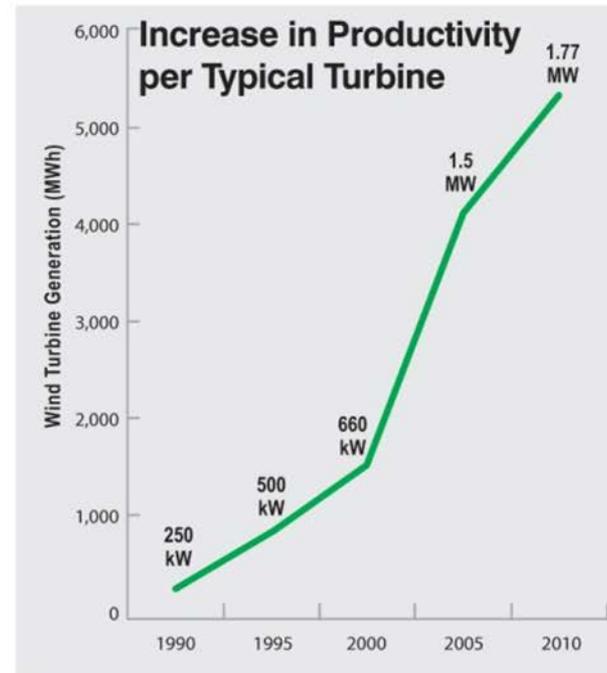
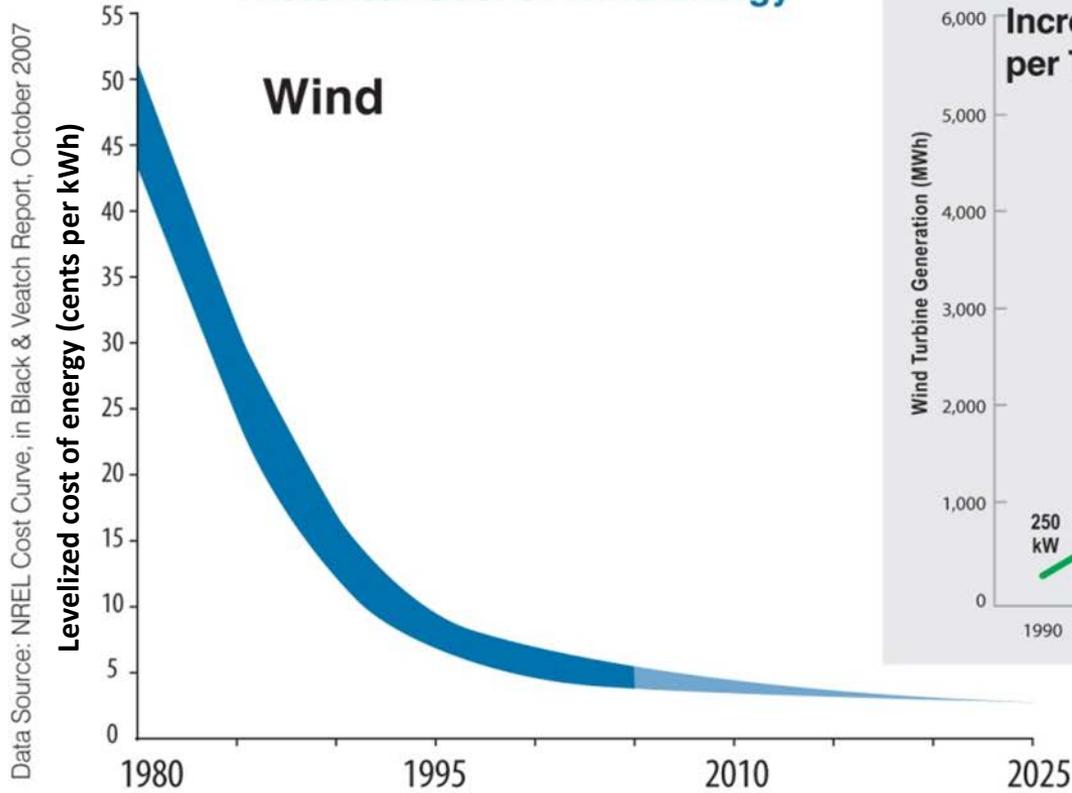
The Renewable Energy Paradigm Shift



renewable **choice**
ENERGY

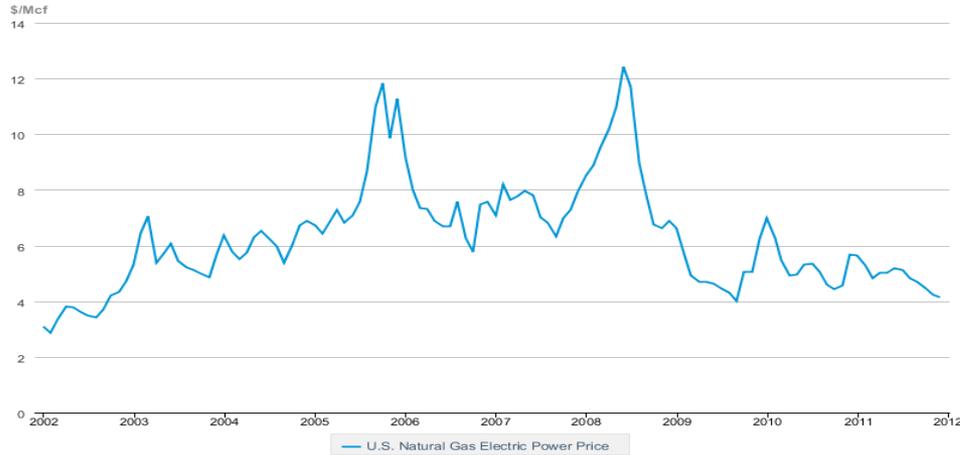
FALLING COSTS

Historical Cost of Wind Energy



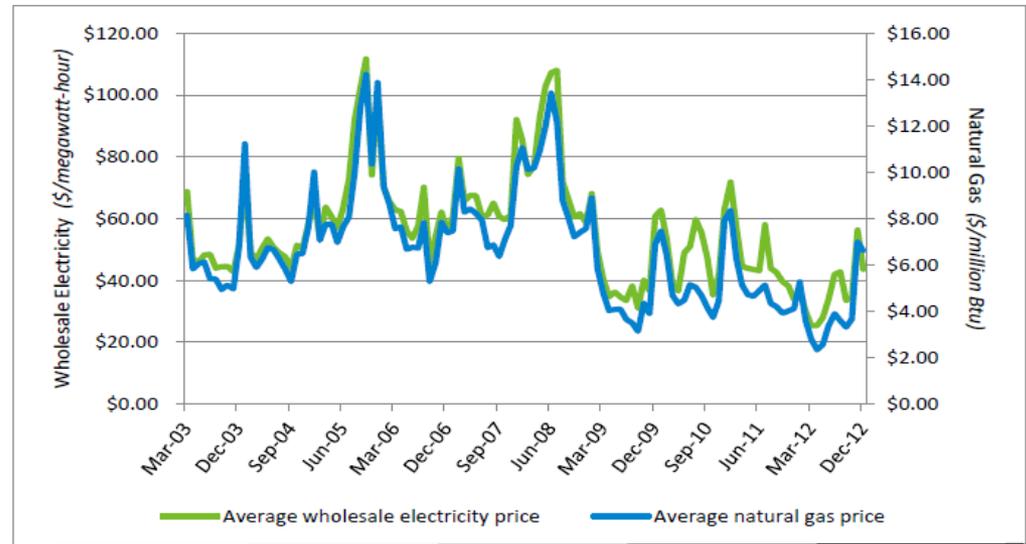
ELECTRICITY VOLATILITY

Natural Gas Prices



eia Source: U.S. Energy Information Administration

Electricity Prices Track Natural Gas Prices



Buyer's Market

- ✓ Thousands of projects in pipeline
- ✓ Fewer investors than 6 years ago
- ✓ Developer desire for new customer class
- ✓ Outsized returns available





CASE SUMMARY

Walmart

Combined strategy

- ✓ On-site renewables
- ✓ PPAs
- ✓ Supply Chain

200 solar installations

26 fuel cell installations

On-site wind turbine

67 MW wind farm PPA supplying 348 stores in Mexico

5th largest renewable energy purchaser in U.S.

“We are using every tool in the tool box as we work toward our goal to be supplied by 100% renewable energy.”

- **Greg Pool**, Sr. Manager, Renewable Energy and Emissions,
Walmart



Walmart Renewable Strategy

Goal: Drive the production of 7 billion kWh of renewable energy globally by December 31, 2020 – an increase of over 600 percent versus 2010.

Achieve over **\$1 billion** in cost savings annually.

Strategy:

- Drive down technology costs for everyone and make renewable energy more affordable.
- Partner with suppliers of utility-scale, offsite renewable energy, driving the production of large wind projects, micro-hydro projects and geothermal.
- Expanding onsite solar, wind, fuel cells and other renewables on our rooftops, parking lots and property.

Options



Competitive power procurement



On-site



Direct PPA

- New Development
- Existing Projects



Virtual PPA



RECs



Investments

- Tax equity investment
- Sponsor equity investment

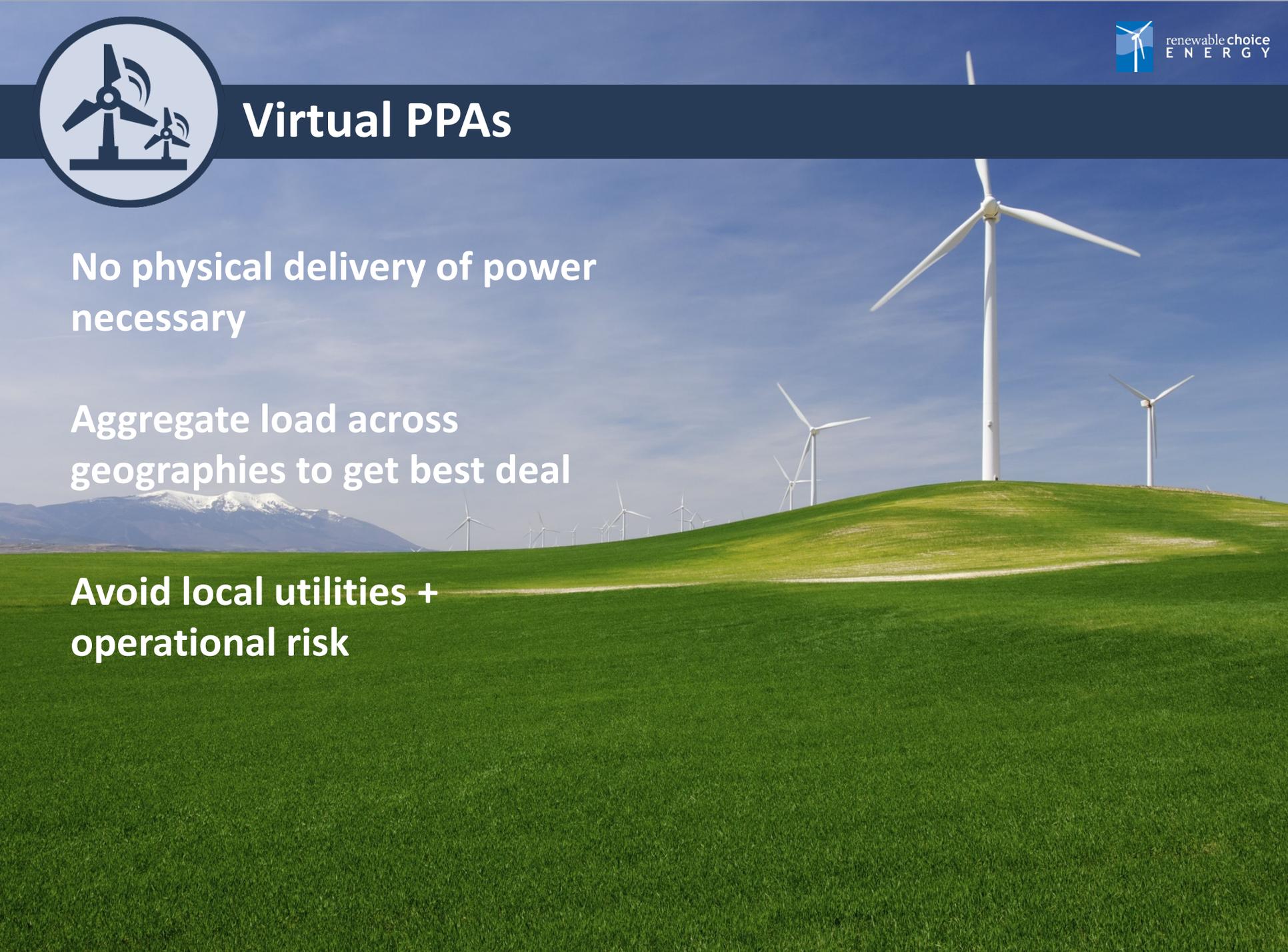


Virtual PPAs

No physical delivery of power necessary

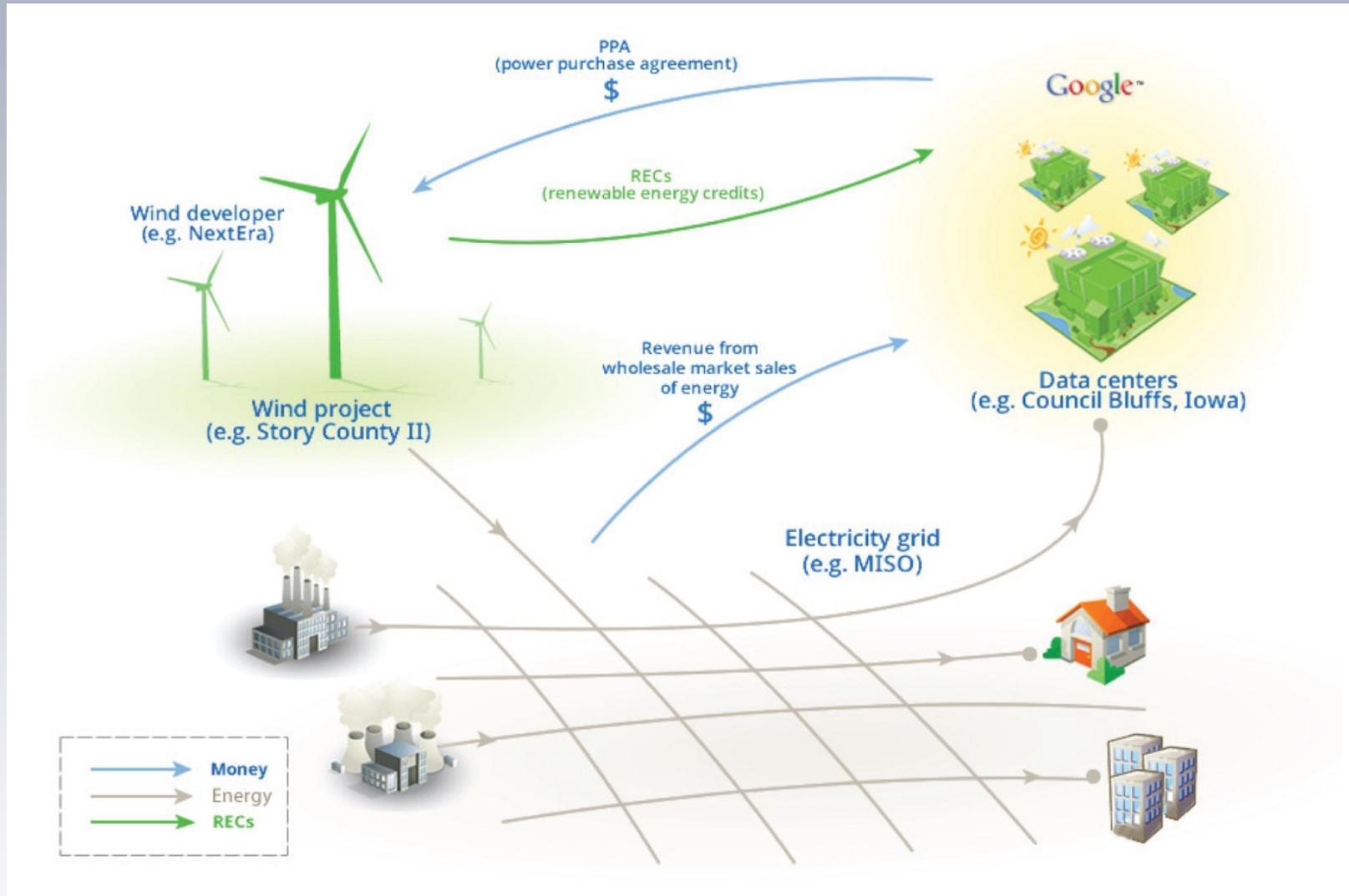
Aggregate load across geographies to get best deal

Avoid local utilities + operational risk





Virtual PPAs



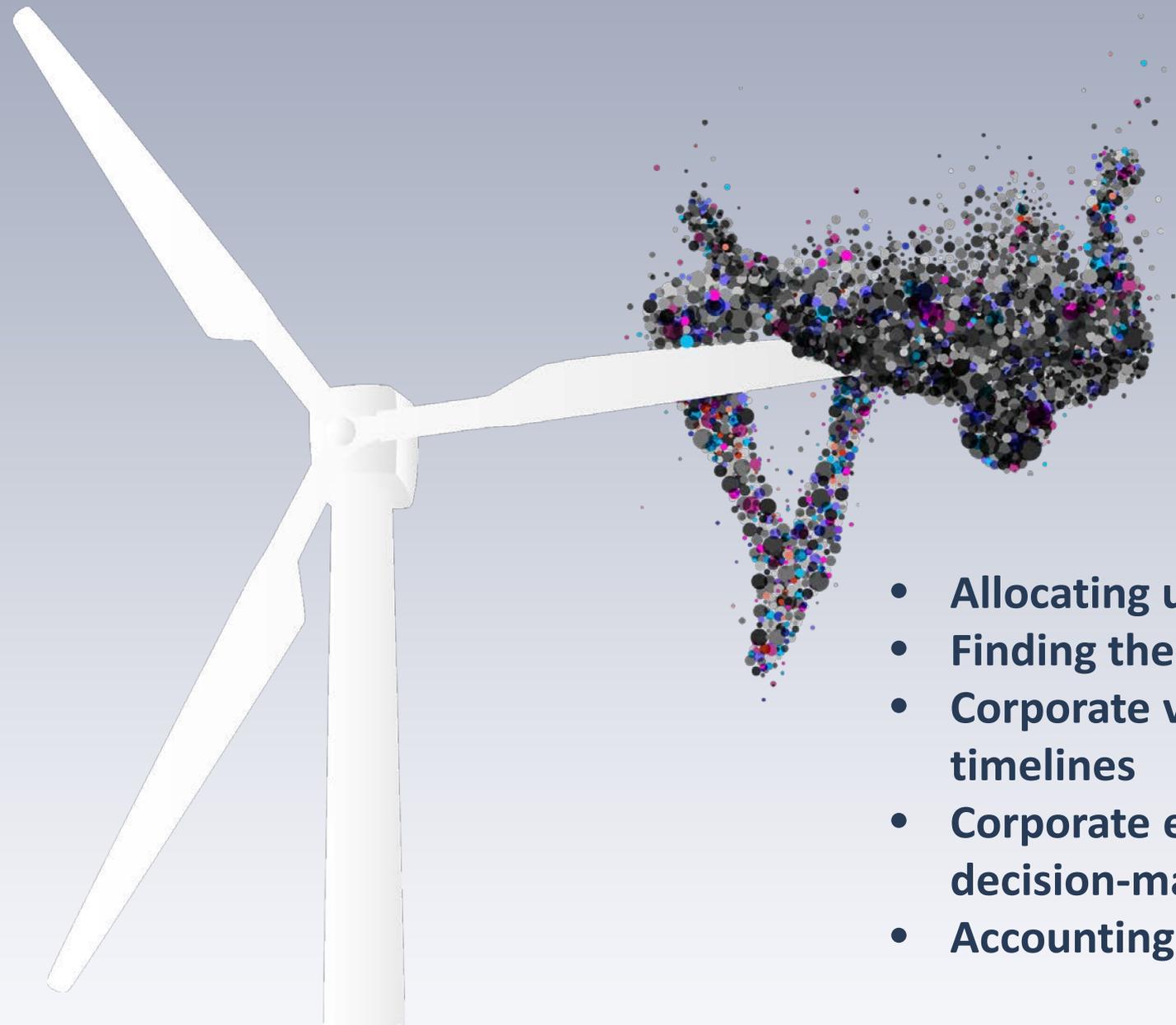
PROJECT FINANCIALS



OPTION COMPARISON

	Leased Facilities	Upfront Investment	Overall Cost Savings	Term	Project Size	Typical Investment Size	Returns/Savings	Geography	Other Requirements
Competitive Electricity	 x		Variable	1-3 years	Any	\$0	0-10% savings	16 states	
On-site Purchase		✓	✓	20 years	100kw+	\$300k+	15-30% IRR	Any	rooftops or land, tax appetite
On-site PPA			✓	20 years	500kw+	\$0	10% savings	22 states	rooftops or land
Direct PPA - existing project	 x	Variable	✓	3-20 years	5MW min	\$0-\$10M	\$1-\$50M	16 states	
Direct PPA - new project		Variable	✓	10-20 years	10-25MW min	\$0-\$20M	\$1-\$100M	16 states	
Virtual PPA	 x	Variable	✓	10-20 years	10-25MW min	\$0-\$20M	\$1-\$100M	Any	tolerance for cash flow variability
Tax Equity	 x	✓	✓	5-10 years	Any	\$5M+	8-15% IRR	6-10 states	tax appetite, accounting considerations
Sponsor Equity	 x	✓	✓	5-10 years	Any	\$1M+	8-20% IRR	6-10 states	accounting considerations
RECs	 x	✓		1-20 years	Any	< \$1M	None	Any	

CHALLENGES



- **Allocating upfront resources**
- **Finding the right project**
- **Corporate vs. developer timelines**
- **Corporate education and decision-making process**
- **Accounting**

▶ Thank You

Feel free to let me know if you have any questions or comments.

Quayle Hodek

Chief Executive Officer

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