



BUSINESS
RENEWABLES
CENTER

STREAMLINING OFF-SITE CORPORATE RENEWABLES TRANSACTIONS

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AGENDA

A Large Opportunity to Capture

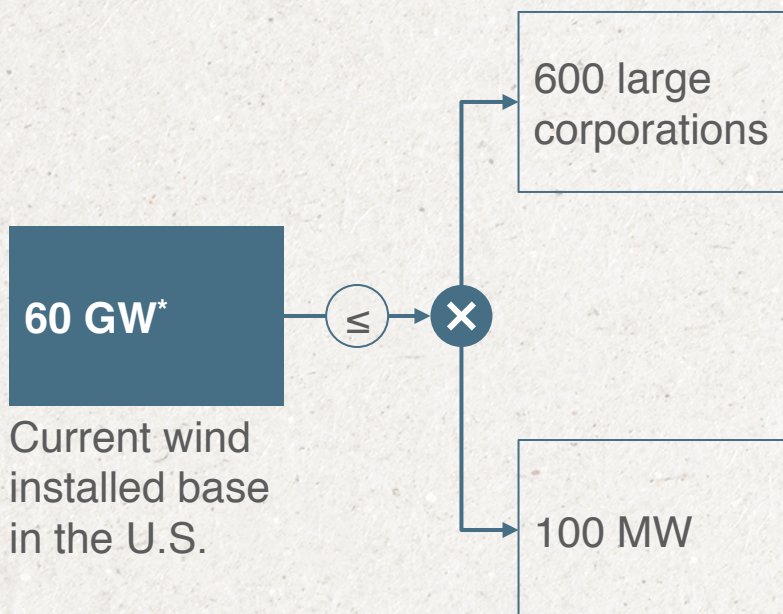
The Obstacles

The Solution

The BRC: Implementing the Solution

CORPORATIONS CAN DOUBLE THE SIZE OF THE RENEWABLES MARKET

Example: U.S. Wind



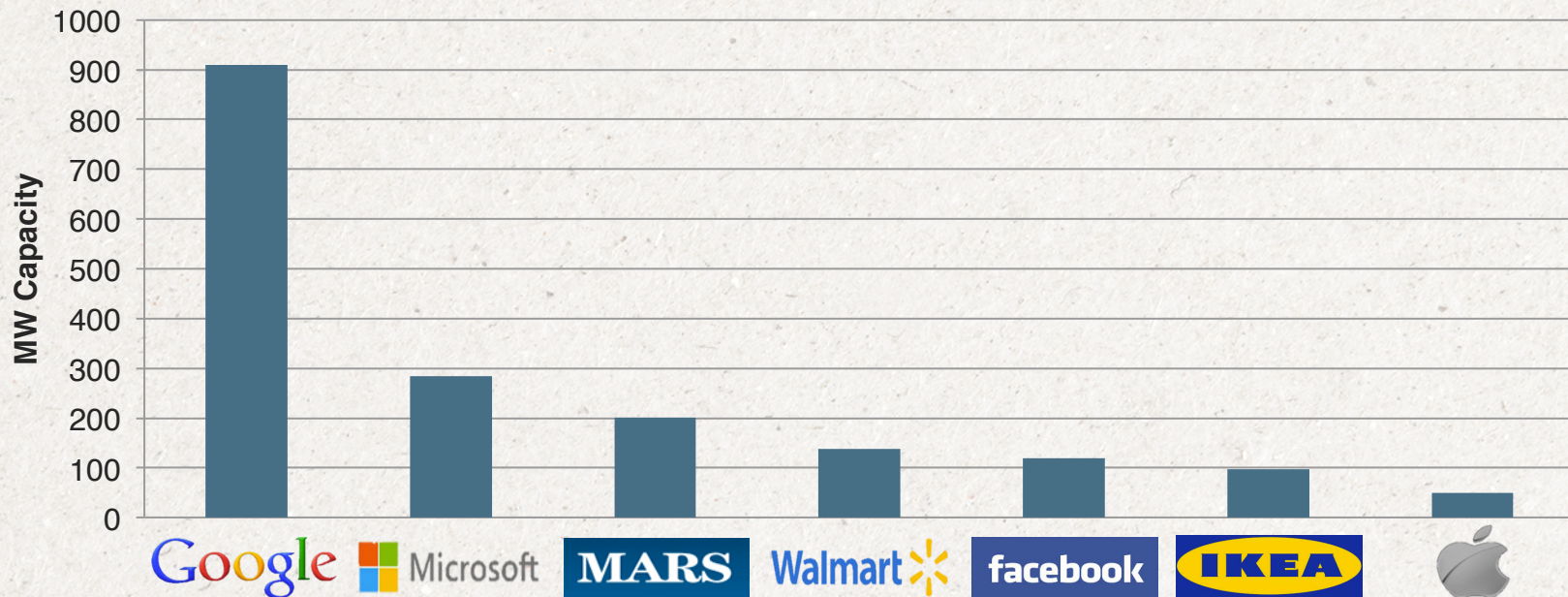
Rationale

- Large-scale, off-site projects have become attractive to corporations due to:
 - Competitive, long-term prices
 - Sustainability benefits
- 100 MW represents roughly **350 GWh** of annual generation
- This is less than **25-50%** of what many large corporations consume in a year

* 61,946 MW as of 06/30/2014
Source: DOE; RMI analysis

A FEW CORPORATIONS HAVE STARTED

Active Utility Scale PPAs and Equity Investment*



Deals	5	2	1	1	1	1	1
PPA	5	2	1	1	1	0	0
Investment	NA**	0	0	0	0	1	1
<i>Average (MW)</i>	<i>182</i>	<i>143</i>	<i>201</i>	<i>139</i>	<i>120</i>	<i>98</i>	<i>50</i>

*Shows active U.S. transactions 40 MW or greater by non-energy non-finance corporations.

**Google has provided tax-equity for 11 utility-scale projects, but total capacity of these investments is unknown.

HOWEVER AT A SLOW COLLECTIVE PACE

Current Rate of Adoption

- Six large corporations join the “off-site renewables club” each year
- Average deal size of 100 MW

When Will We Reach 60 GW?

- In one century

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THERE ARE TWO KEY PROBLEMS

The slow pace of corporate adoption is due to:

1 Many companies are not aware of the potential benefits:

- Locking in, 20 years or more, cost competitive prices; and
- Achieving early corporate sustainability objectives.

2 Those that are aware are held back by the complexity:

- Opacity of the market;
- Lack of standardization;
- Diverse expertise needed;
- Lack of internal processes;
- Accounting / financial pitfalls.

ROOT CAUSE OF THE PROBLEM

Developers

- Specialist sellers
- Used to working with domain-expert buyers (i.e., utility companies)

Market Failure

Corporations

- Occasional buyers
- Generally lack requisite expertise and experience

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HOW OTHER INDUSTRIES HAVE BROUGHT TOGETHER OCCASIONAL BUYERS AND EXPERT SELLERS

Example: Travel

1 Guidance

- Navigation Assistance
- Industry Standards
- Access to New Markets

2 Delivery

- Hotels
- Restaurants
- Museums

WHAT THE CORPORATE RENEWABLE ENERGY MARKET NEEDS

1 Guidance

No industry-wide guiding organization to help corporations navigate this complex market

2 Delivery

- Project developers
- Aggregators
- Transaction Consultants
- Law firms and
- Technical experts

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The BRC: Implementing the Solution

THE BUSINESS RENEWABLES CENTER WILL SERVE AS A GUIDE AND SERVICE DELIVERY PLATFORM



NAVIGATION

The BRC will help corporations navigate the complicated renewable-energy procurement landscape. Support products will include:

- 1** A Guidebook and a few hours of Consulting Assistance highlighting:
 - Process steps
 - Deal structures
 - Case studies
 - Common pitfalls
- 2** Make or Buy Decision Assistance:
 - What should be done internally
 - What can be outsourced
- 3** Network of Delivery Experts:
 - Overview of available services
 - Service provider descriptions
 - Ratings by customers

GUIDEBOOK – PROCESS STEPS

Defining the strategy

Setting up the organization

Delivering deals

Assessing delivery

Identifying opportunities

Selecting opportunities

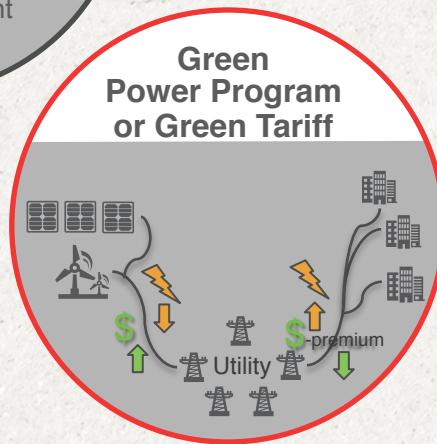
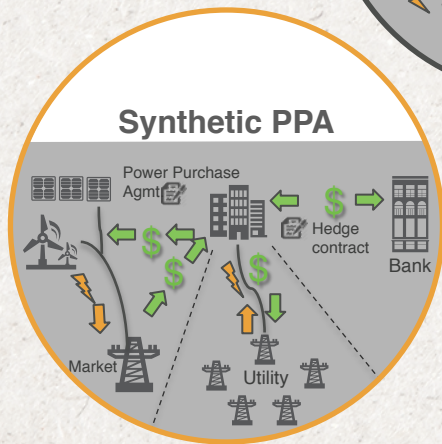
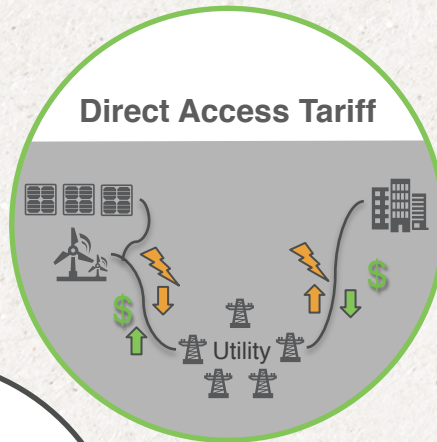
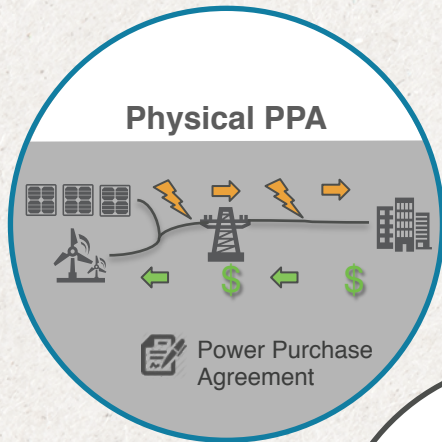
Negotiating key terms & conditions

Performing due diligence

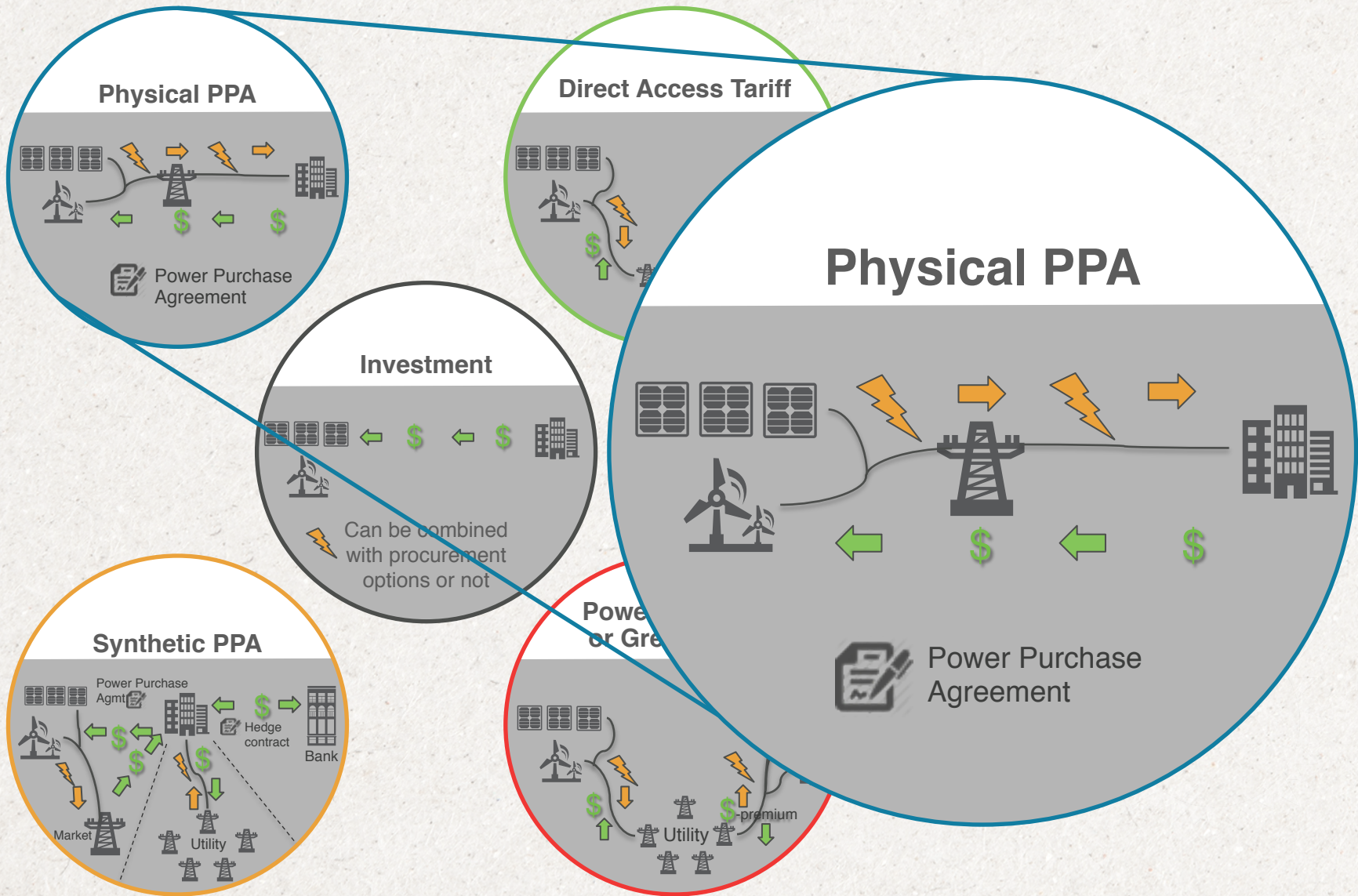
Getting deal approval

Financing

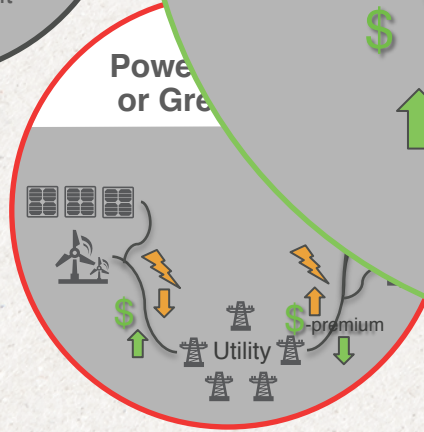
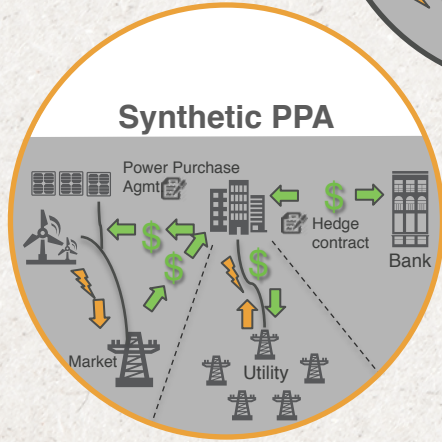
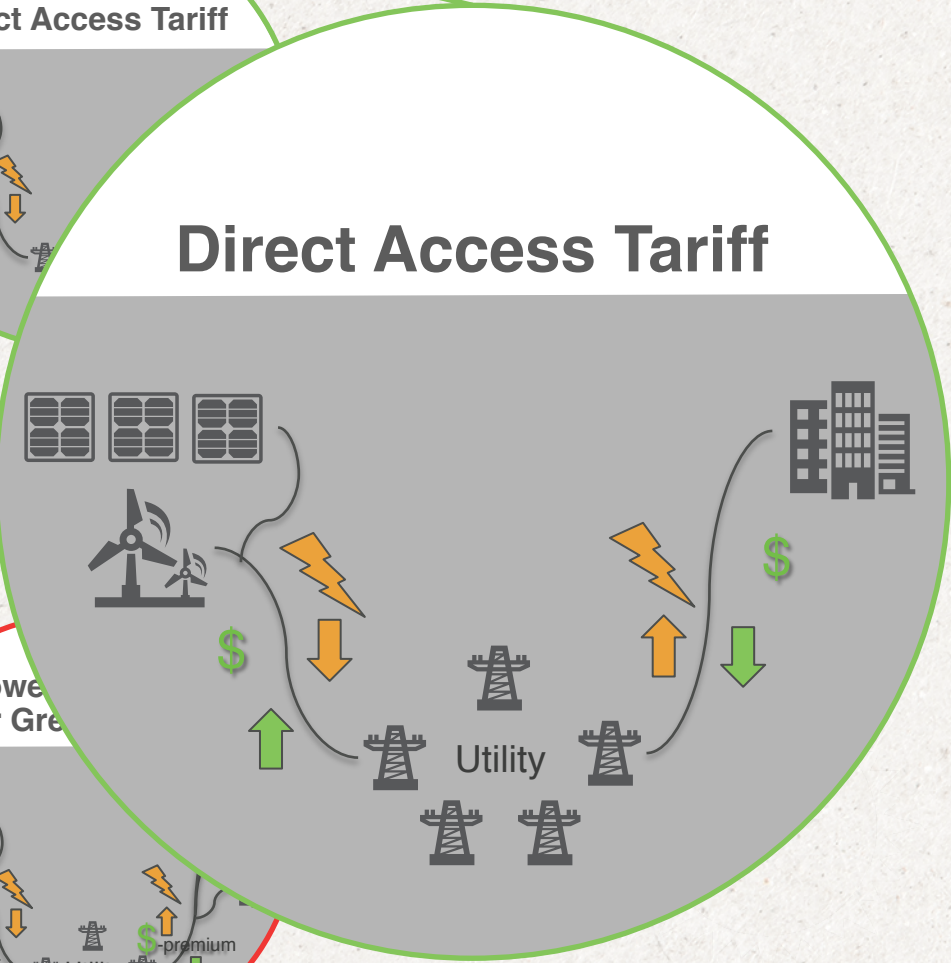
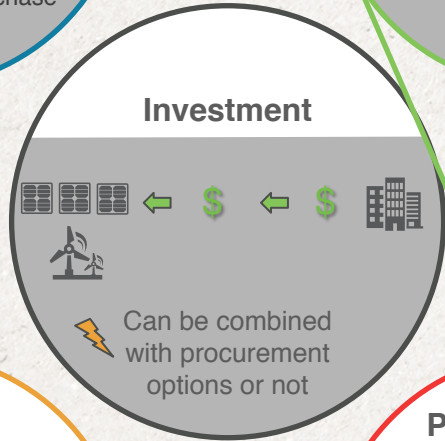
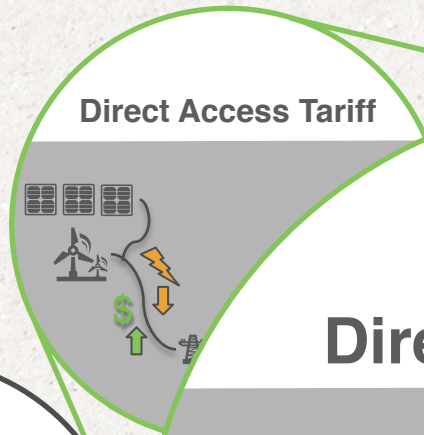
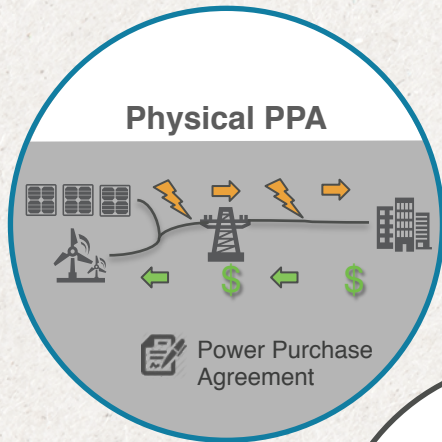
GUIDEBOOK – DEAL STRUCTURES



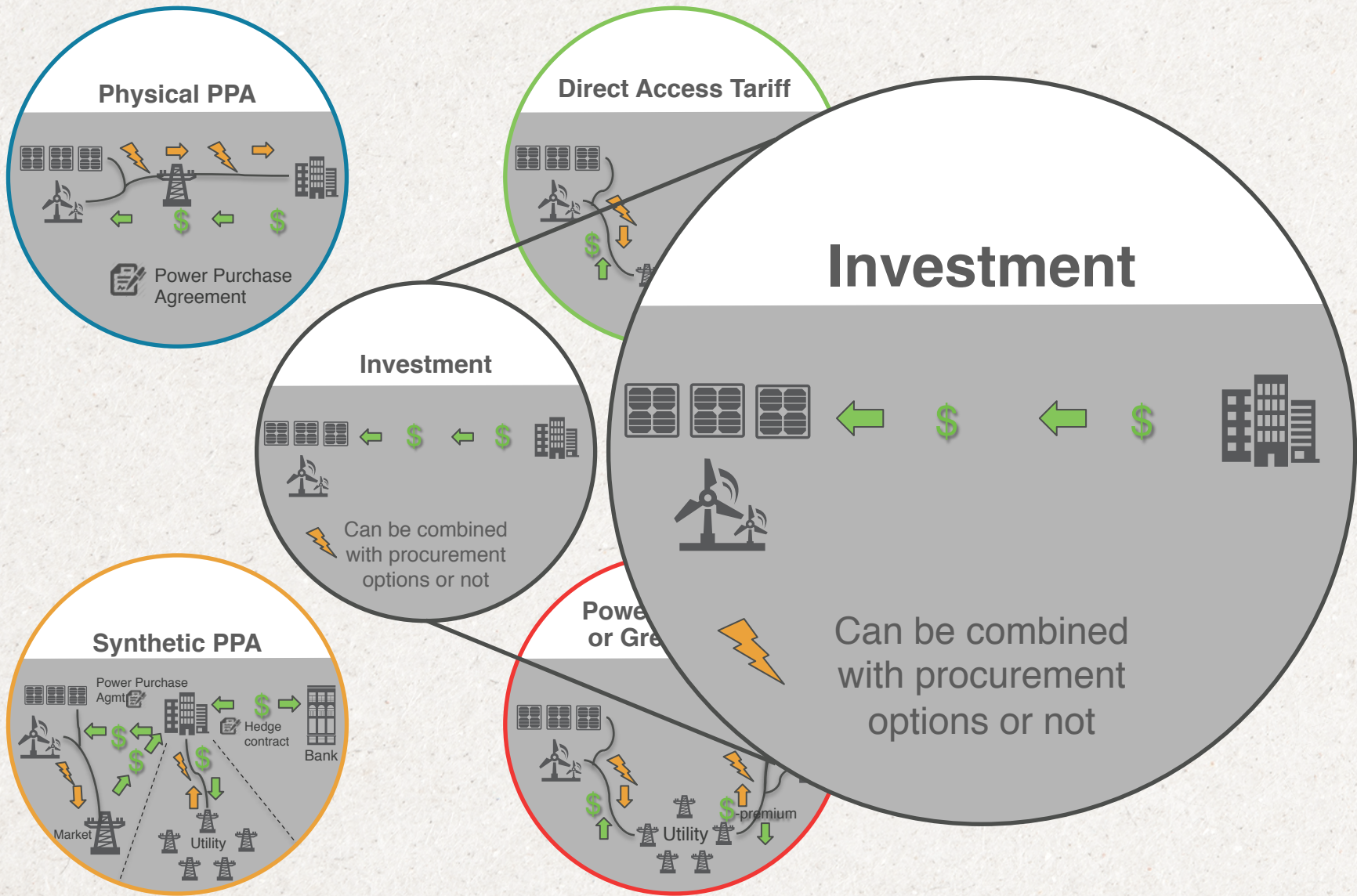
GUIDEBOOK – DEAL STRUCTURES



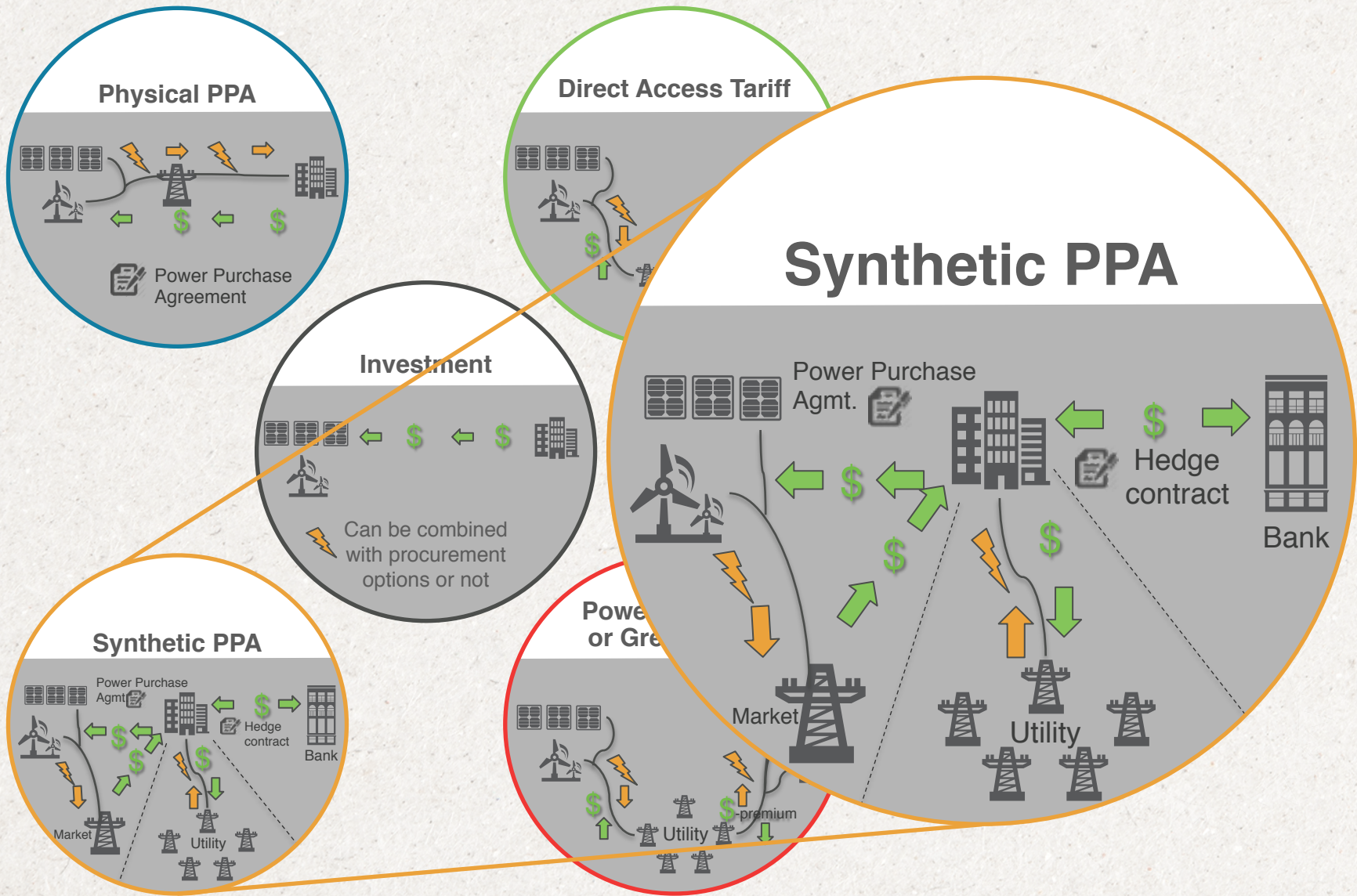
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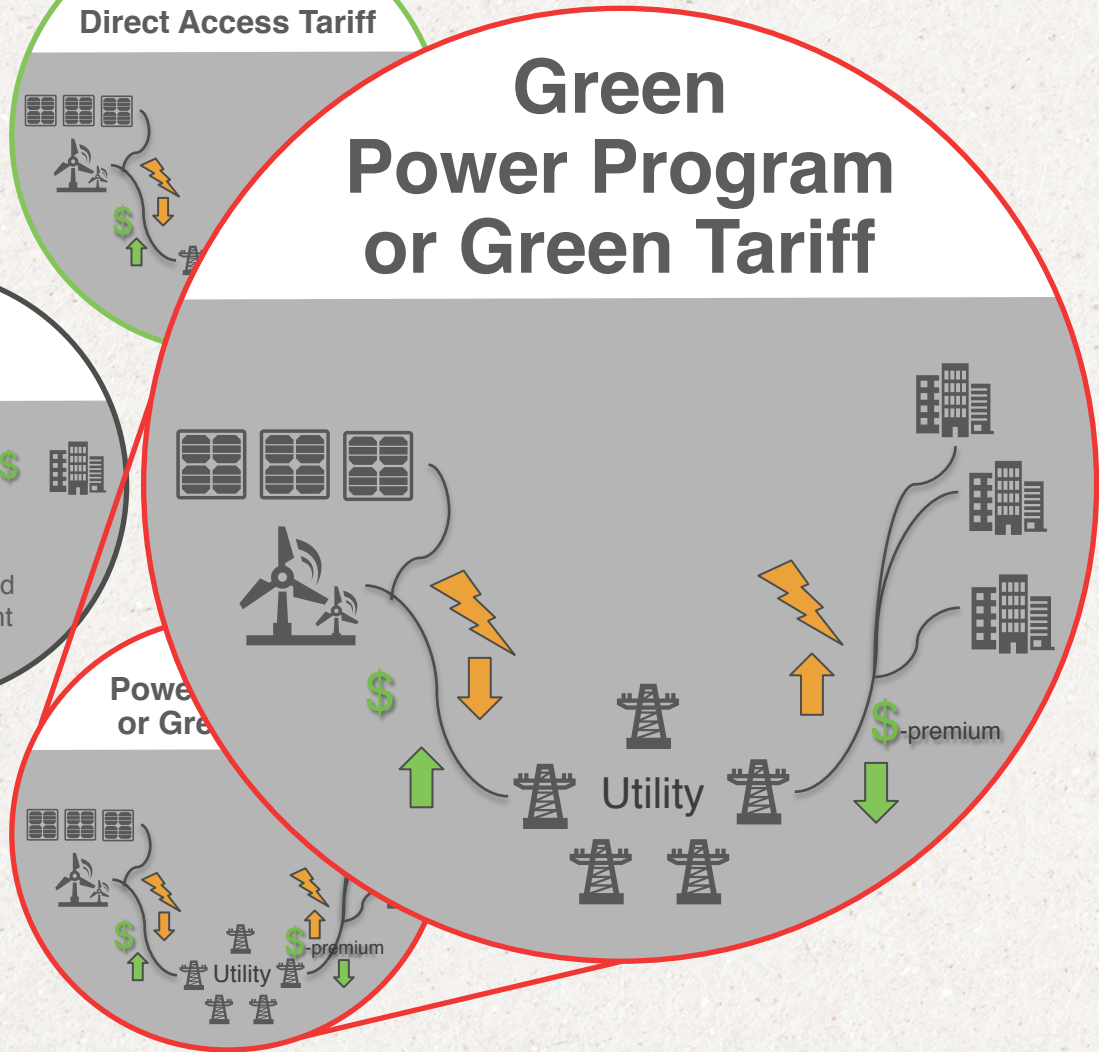
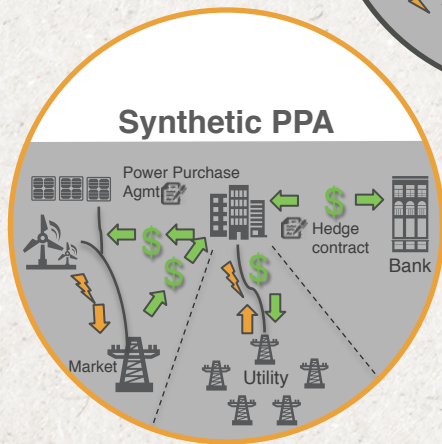
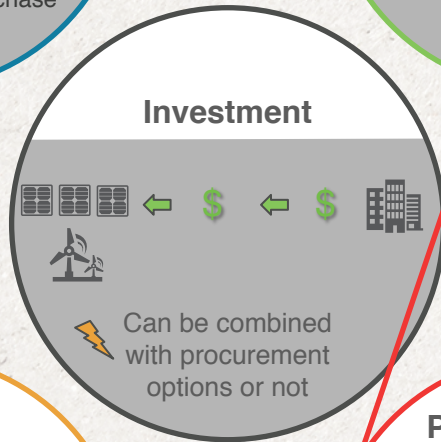
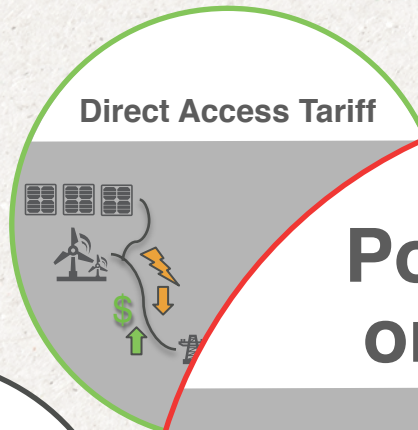
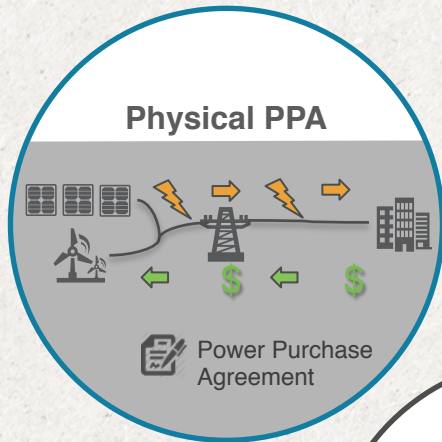
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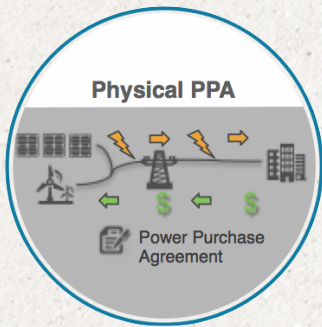
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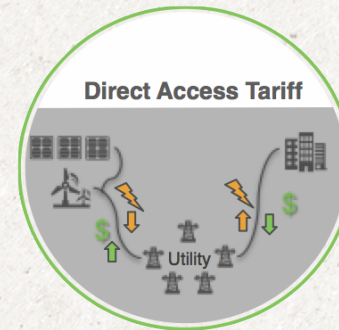
GUIDEBOOK – DEAL STRUCTURES



GUIDEBOOK – CASE STUDIES

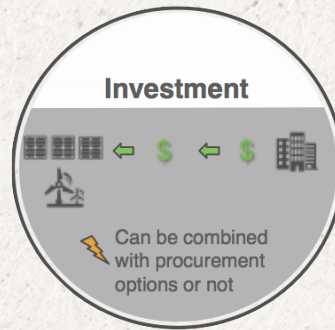


Walmart



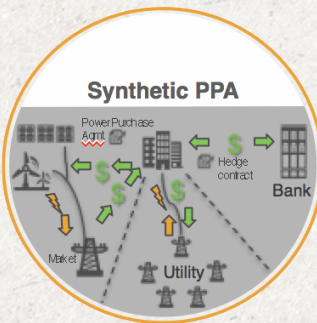
Google

facebook



Google

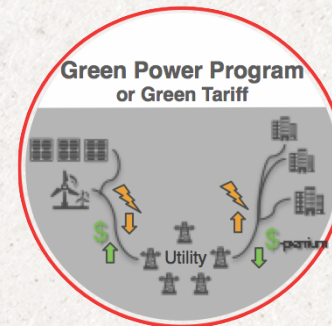
IKEA



Google

MARS

Microsoft



Many corporations participate, but at < 50 MW

GUIDEBOOK – CASE STUDIES – PHYSICAL PPA



Physical PPA:

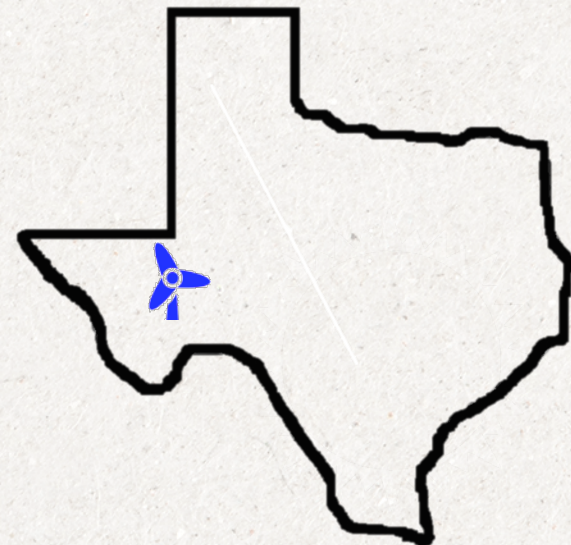
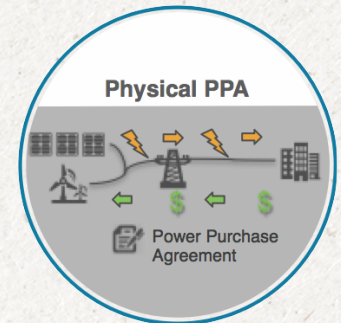
- Texas: Competitive electricity market allows for direct purchases
- Wal-Mart: **Created own energy service provider** to procure energy for Texas facilities

Example Contract: Logan Gap PPA

- 10 year physical PPA for 60% output from 200 MW project
- Signed August 5, 2014
- Equals ~20% of Wal-Mart's Texas electricity use

Wal-Mart is a sophisticated buyer and has a large demand for electricity in Texas, a deregulated state

Direct Access Tariff provide an option for facilities located in regulated service territories



GUIDEBOOK – CASE STUDIES – DIRECT ACCESS TARIFF



Direct Access Tariff

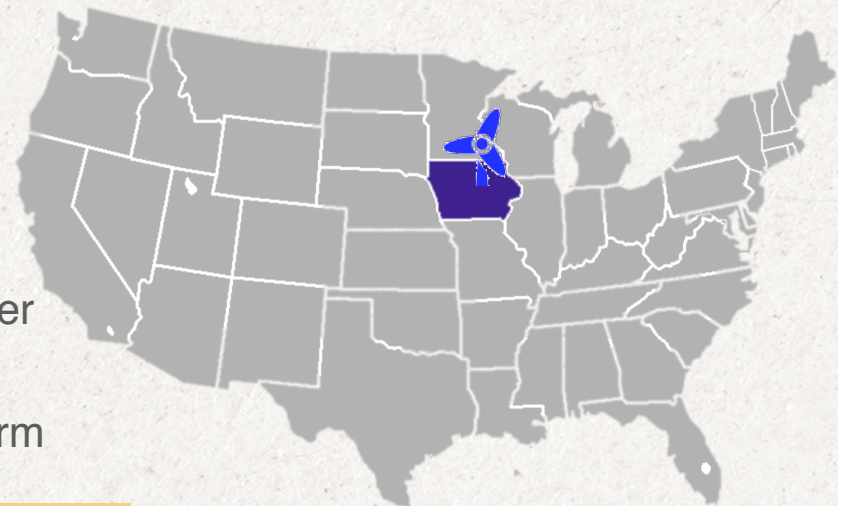
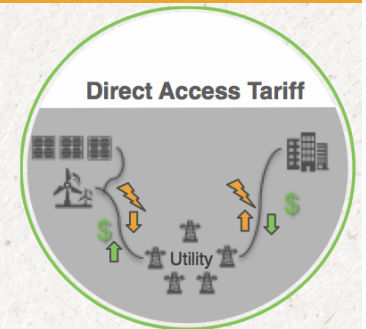
- Agreement negotiated with utility
- New corporate energy load is served by new renewables project(s)

Example Contract: MidAmerican Agreement

- Facebook agreed to buy energy from 138 MW project to offset consumption from Iowa data center
- Signed November 2013
- Mid-American Energy owns and operates wind farm

Requires local utility cooperation and generally only available for new facilities with significant demand

Synthetic PPAs allow corporations to offset power usage regardless of facility location or local utility



GUIDEBOOK – CASE STUDIES – SYNTHETIC PPA



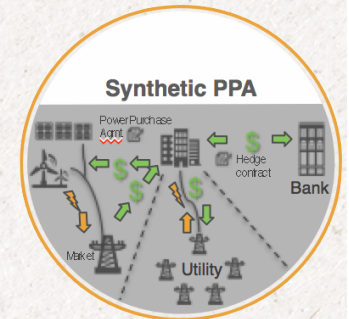
Synthetic PPA (Hedge Contract)

- Buy a fixed quantity of MWh at a fixed price
- Sell energy back to grid at market price

Example Contract: Mesquite Creek Wind Farm

- 22 year PPA for 100% of a 200 MW project
- Signed April 1, 2014
- ***Equivalent to 100% of Mars's U.S. electricity needs or 24% of global demand***

Synthetic PPAs are complex, purely-financial transactions that do not reduce local utility purchases



GUIDEBOOK – COMMON PITFALLS

Typical CFO Concerns / Issues



Detail in Following
Pages

- i. Accounting
- ii. Balance sheet liabilities and credit rating
- iii. Cost / Pricing
- iv. Regulatory exposure
- v. Asset / business unit life and load management
- vi. Electricity market risks

GUIDEBOOK – COMMON PITFALLS – ACCOUNTING ISSUES

Situation

Desire to execute PPA with simplest (Accrual) accounting

Complication

Derivatives accounting easily triggered

- Drives mark-to-market valuation
- Can create large liabilities and significant fluctuations on balance sheet

Other deal actions can trigger accounting for:

- Capital lease
- Operating lease
- Consolidation

Resolution

Target work-arounds include:

- Normal purchases and normal sales (NPNS) exception – for contracts of commodities delivered and used or sold, where costs are expensed as incurred (like utility accounting)
- Hedge accounting – allows splitting of realized and unrealized gains on income statement

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Resolution

Target work-arounds include:

• Normal purchases and sales (NPS)

Success likelihood improved with:

- Direct access to key experts in accounting firms
- Done-deal case studies
- CFO deal presentation templates

GUIDEBOOK – COMMON PITFALLS – BALANCE SHEET LIABILITIES

Situation

Desire energy transactions to have only positive influence on corporate financial statements and credit rating

Complication

- **Liabilities:** Long-term contracts for significant power volumes produce large, long-term liabilities on a corporation's balance sheet
- **Credit Rating:** Long-term liabilities can cause credit rating agencies to lower a corporation's debt rating

Resolution

- **Liabilities:** Pursue lower balance sheet accounting impact solutions, and/or PPA contracts with shorter durations
- **Credit Rating:** Consider financial statement effects holistically, including higher net income due to lower net energy payments and lower exposure to electrical market fluctuations

GUIDEBOOK – COMMON PITFALLS – BALANCE SHEET LIABILITIES

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Resolution

- **Liabilities:** Pursue lower balance sheet

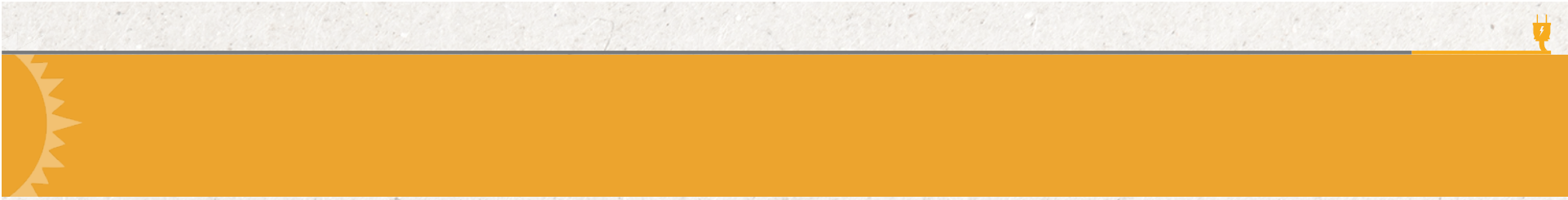
Success likelihood improved with:

- Case studies of how other companies overcame these concerns
- Provide guidance to rating agencies
- Shorter-term PPAs

STANDARDIZATION

The BRC will work with market participants to ensure both quality of deal delivery and quality of deal performance

Area	Specific Example
Transactional Standards	<ul style="list-style-type: none">• Process Steps• Data Requests for Developers• Requests for Proposal (RFPs)• Contract Terms and Conditions• Organization of Data Rooms• Risk Assessment / Qualifications
Approval Standards	<ul style="list-style-type: none">• Standard Answers to Difficult Board and Treasury Department Questions• Standard Presentations for Internal Discussions
Performance Standards	<ul style="list-style-type: none">• Reviews and Expectations of Suppliers• Reviews and Expectations of O&M Providers• Key Due Diligence Items and Performance Metrics



EXPLORATION

The BRC will serve as a co-design platform for corporate members to collectively crack open new markets and address key issues

Potential BRC Trajectory

Deregulated
U.S. Markets

Regulated
U.S. Markets

Renewable Heat

International
Markets

BRC FROM BIRTH TO MATURITY

Today

- Incubated by RMI
- Members contribute to launch the group

January 1st, 2017

- BRC is a stand-alone, non-profit entity
- Governed by members
- RMI will remain one, of many, members



HOW CAN I LEARN MORE?

Website: www.rmi.org/business_renewables_center

Email: brc@rmi.org.



Thank You!

Questions?



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Creating a clean, prosperous,
and secure energy future™