Fortune 500 companies are looking at renewable energy as a way to (i) capture economic benefits, (ii) capture image / public relations benefits, and (iii) achieve their sustainability targets. The relative weights attributed to these three objectives vary by company.

For most corporations, off-site renewable energy offers greater potential than on-site renewable energy.

Fast followers can now benefit from the experience of the first movers in large off-site renewable deals. These transactions are becoming easier to execute than just a few years ago.
**WHY DO LARGE CORPORATIONS SIGN LONG-TERM PPAs?**

<table>
<thead>
<tr>
<th>Multinational retailer</th>
<th>Large internet company A</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Achieved cost savings</td>
<td>• Delivered stable, predictable energy costs not subject to fossil fuel commodity price risk</td>
</tr>
<tr>
<td>• Improved public image</td>
<td>• Improved reputation among customers and peers</td>
</tr>
<tr>
<td>• Improved customer satisfaction</td>
<td>• Improved support from local constituencies</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Large internet company B</th>
<th>Major consumer goods company</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Increased profitability</td>
<td>• Achieved cost savings</td>
</tr>
<tr>
<td>• Fuel price hedge</td>
<td>• Made major progress towards sustainability goals</td>
</tr>
<tr>
<td>• Reduced reputational risk</td>
<td>• Improved reputation among customers and NGOs</td>
</tr>
<tr>
<td>• Demonstrated environmental leadership</td>
<td>• Raised employee morale</td>
</tr>
<tr>
<td>• Simplified GHG reduction program by aggregating efforts into one large project</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Global technology company</th>
<th>Major healthcare provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Raised internal awareness of energy and sustainability efforts</td>
<td>• Improved health of the community by reducing fossil fuel generation</td>
</tr>
<tr>
<td>• Improved external awareness, adding value to brand</td>
<td>• Aligned operations with mission</td>
</tr>
<tr>
<td>• Achieved cost savings</td>
<td>• Increased renewable energy generation without increasing expected costs</td>
</tr>
</tbody>
</table>
# WHY DO LARGE CORPORATIONS SIGN LONG-TERM PPAs?

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Description</th>
<th>Multinational retailer</th>
<th>Large internet company A</th>
<th>Large internet company B</th>
<th>Major consumer goods company</th>
<th>Global technology company</th>
<th>Major healthcare provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial</td>
<td>• Achieved cost savings&lt;br&gt;• Delivered stable, predictable energy costs&lt;br&gt;• Increased renewable energy sourcing at no cost increase</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Reputational</td>
<td>• Reduced reputational risk&lt;br&gt;• Improved public image&lt;br&gt;• Improved customer satisfaction&lt;br&gt;• Improved support from local constituencies&lt;br&gt;• Demonstrated environmental leadership</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Environmental</td>
<td>• Improved health of the community</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Internal</td>
<td>• Raised employee morale&lt;br&gt;• Aligned operations with mission&lt;br&gt;• Raised internal awareness of sustainability efforts&lt;br&gt;• Made major progress towards sustainability goals</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

Source: RMI interviews
### IMPLICATIONS ON TRANSACTIONS – CASE OF NY WIND FARM

<table>
<thead>
<tr>
<th>Sourcing from asset</th>
<th>RECs</th>
<th>Cost per MWh</th>
<th># That Would Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing asset</td>
<td>Buy power only</td>
<td>(Asset won NYSERDA REC auction in the past)</td>
<td>-$5 (discount)</td>
</tr>
<tr>
<td>New asset</td>
<td>Buy power only</td>
<td>(Asset just won NYSERDA REC auction)</td>
<td>-$5 (discount)</td>
</tr>
<tr>
<td>New asset</td>
<td>Buy power only</td>
<td>(Asset did not win NYSERDA auctions)</td>
<td>-$5 (discount)</td>
</tr>
<tr>
<td>New asset</td>
<td>Buy power only</td>
<td>Buy Midwest RECs</td>
<td>-$5 (discount)</td>
</tr>
<tr>
<td>New asset</td>
<td>Buy power and RECs</td>
<td>Swap NY RECs in PJM for a $5 profit</td>
<td>-$5 (discount)</td>
</tr>
<tr>
<td>New asset</td>
<td>Buy power and RECs</td>
<td>Buy NY RECs</td>
<td>+$5 (premium)</td>
</tr>
</tbody>
</table>
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SIGNIFICANT DEVELOPMENT OF ON-SITE GENERATION

U.S. ON-SITE SOLAR CAPACITY BY NON-SOLAR COMPANIES, MW


Prologis’s and Announced Kaiser Permanente’s capacity figures come from RMI research in 2015.

Total capacity: 643 MW
FEWER COMPANIES HAVE DONE OFF-SITE DEALS – BUT THE VOLUMES ARE SIX TIMES LARGER IN AGGREGATE

U.S. OFF-SITE RENEWABLES TRANSACTIONS, MW

Total capacity: 2866 MW

Source: RMI research
EXAMPLE 1: WALMART BUYING LOW-COST TEXAS WIND

Transaction Details

- 10-year PPA signed with Pattern Energy signed August 2014
- 200 MW project with Walmart receiving 60% output
- Equals ~20% of Walmart’s Texas Electricity use
- Project located in Comanche County, TX (ERCOT)
- Walmart’s largest PPA to date

Context

- Walmart has 563 stores and 19 distribution centers in Texas
- Walmart signed first Texas PPA (90 MW) in 2008
- Texas is top state for corporate off-site PPAs*

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* Texas has had 5 publicly announced corporate off-site PPAs since 2013
EXAMPLE 2: IKEA INVESTS IN A WIND FARM

**Transaction Details**

- 165 MW Texas wind farm
- Together with an existing wind farm in Illinois, will generate nearly 1,000 GWh per year
- Outright project ownership in both Texas and Illinois
- Texas deal announced **November 2014**, expected to be operational in late 2015

**Context**

- IKEA’s 2020 goal: produce as much renewable energy as it consumes globally
- Committed to have invested $1.9 billion in wind and solar by end of 2015
- Also has solar PV on 90% of its U.S. rooftops (total capacity 38 MW)
- Owns wind farms in eight other countries

EXAMPLE 3: AMAZON WEB SERVICES

Transaction Details

- 13-year PPA signed with Pattern Energy
- 150 MW project, with expected 500 GWh annual production
- Received accolades from Greenpeace – “good first step”
- Project located in Benton County, IN (MISO)
- Announced January, 2015

Context

- Long-term commitment to achieve 100% renewable energy announced in November, 2014
- AWS already had three carbon-neutral regions by January 2015:
  - US West (Oregon)
  - EU (Frankfurt)
  - AWS GovCloud (US)

EXAMPLE 4: APPLE BUYS $850M OF CALIFORNIA SOLAR

Transaction Details

- $848 million contract
- 130 MW portion of 280 MW First Solar California Flats Solar Project
- 25 year PPA
- Announced **February 2015**, expected to be operational by end of 2016
- Other deal terms not disclosed

Context

- Deal will supply enough electricity for all of Apple’s California stores, offices, headquarters, and a data center
- All of Apple’s data centers are now powered by renewables
- Two 20 MW plants in North Carolina already are supplying power; also signed PPAs with developers for a third 20 MW plant in North Carolina and a 20 MW plant in Nevada

EXAMPLE 5: DOW CHEMICAL BUYS WIND ENERGY IN TEXAS

Transaction Details

• 200 MW project (all allocated to Dow)
• Farm will be complete in Q1 2016
• Single deal makes Dow the third-largest corporate purchaser of wind energy in the U.S.
• Deal length and other terms have not been disclosed – was closed in March 2015

Context

• Dow adopted a target of procuring 400 MW of clean energy by 2025
• Dow has a major manufacturing facility in Freeport, Texas (near Houston)
• Dow released “An Energy Plan for America” in 2013; two of its four pillars were accelerating renewable energy and transitioning to a sustainable energy future

AND CEOs HAVE STARTED TO BE ENGAGED

“We are doing this because it is right to do, but you may also be interested to know that it’s good financially to do it. We expect to have very significant savings . . . .”

– Tim Cook, CEO, Apple

“Investing in renewable power makes complete business sense. It aligns with our corporate expectations on financial returns and our values.”

– Steve Howard, CSO, IKEA

“Not only do we think renewable energy is important from a climate change perspective, it also makes business sense. The buy helps protect Google from higher energy prices in the future”

– Sam Arons, energy strategist, Google

“More than ever, we know that our goal to be supplied 100 percent by renewable energy is the right goal and that marrying up renewables with energy efficiency is especially powerful. . . . The math adds up pretty quickly – when we use less energy that’s less energy we have to buy, and that means less waste and more savings. These new commitments will make us a stronger business, and they’re great for our communities and the environment”

– Mike Duke, president and CEO, Walmart

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FAST FOLLOWERS CAN CAPITALIZE ON FIRST MOVERS’ EXPERIENCE

• Project developers and financiers are more experienced, resulting in greater efficiency, lower execution risk, and better pricing

• Failure to plan for and address accounting issues has scuttled many deals, but precedents now exist, and outside advisers are more familiar with deal structures and accounting treatments

• Innovations in deal structuring have further improved overall economics for corporate buyers

• Experienced corporate buyers are willing to share their experience – in most cases it is not considered strategic / core business
Accounting Primer Introduction

Purpose

The purpose of this guide is to provide information on how to best address accounting issues emerging from large off-site renewable transactions. The main issues that will be covered are:

- Derivative Accounting
- Consolidation of Special Purpose Vehicles
- Lease Accounting

Caveats, Limitations and Disclaimers

- Project leaders need to keep in mind that accounting treatments and deal structures are closely intertwined. In this guide we discuss specific terms in deal structures that may impact the appropriate accounting treatment. These same terms have economic, legal, regulatory, tax, or other implications for the transaction, although this report is focused solely on accounting issues.
- This guide is focused on US GAAP rules. There are significant differences with IFRS (in particular lease accounting treatment).
- This guide is intended as help on accounting issues. We make no guarantee that the corporate auditors will share our views.

Source of Information

The contents of this guide originated from:

- Numerous interviews and case studies that the BRC undertook with a dozen corporate buyers, project developers and third party service providers with deep experience in off-site renewable energy transactions. The corporate buyers amongst this group have already completed eight deals with a combined capacity of over 1000 MW.
- Publicly available accounting documentation (e.g. FASB).
- Interviews with third-party legal, finance, and accounting experts with experience in off-site renewable transactions.
Structure of this Guide

The graphic below describes the structure of this guide. Each box corresponds to a web page that can be accessed directly.

This guide has two main sections:

- The first describes certain applicable accounting rules and regulations (US GAAP).
- The second describes how these rules and regulations apply to virtual PPAs (aka synthetic PPAs aka contracts for differences); the most commonly used structure for large off-site renewable transactions. A description of virtual PPAs is available on the following page (Accounting Treatment of Virtual PPAs).

Upon demand this guide could be expanded to other accounting standards (e.g. IFRS) and/or other deal structures (e.g. physical PPAs).
Creating a clean, prosperous, and secure energy future™