Solar on Contaminated Lands – Turning Brownfields into Brightfields
November 2017
Soltage - Company Overview

Soltage originates, develops, finances and operates electricity power stations using proven solar technology

- Founded in 2006 and based in Jersey City, NJ with assets deployed in 8 states
- Targets commercial, industrial, municipal and small-utility scale clients
- Has historically focused on key Northeast markets and opportunistically expanded to other select U.S. markets

What We Do

- Originate and stringently select high-quality projects
- Finance projects with leading capital partners
- Provide attractive returns to investors
- Supervise project development
- Manage operating assets

What We Don’t Do

- Take technology risk
- Physically construct solar projects
- Work with anybody but the highest quality partners
- Operate beyond the U.S.

Corporate Milestones

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<tbody>
<tr>
<td>Soltage Founded</td>
<td>1st Project Developed</td>
<td>5 assets under management</td>
<td>10th Project Developed</td>
<td>1st portfolio $50 million capital raised</td>
<td>20th Project Developed $100 Million capital raised</td>
<td>25th Project Developed</td>
<td>35th Project Developed</td>
<td>Additional $250 Million capital raised</td>
<td>500+ MW forward pipeline</td>
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Soltage is a leading independent solar power company with a proven record of successful deployments
Why Solar on Brownfields?

Leverage existing infrastructure for additional benefits!

- Potential to generate $$ on underutilized properties
- Community and Regulator Acceptance
- Can save $$ by reducing cleanup costs
- Low impact use of property
Regulatory Benefits of Solar on Brownfields

❖ Help meet Renewable Portfolio Standard (RPS) Requirements

❖ Satisfy Green Remediation Requirements

❖ Greater Community Acceptance (Easier Permitting Effort)

❖ US EPA Re-Powering America’s Land Initiative
  ❖ www.epa.gov/re-powering

❖ US EDA – Power Initiative Grant (Coal Communities)
  ❖ www.eda.gov/power

Source: Environmental Protection Agency
Financial Benefits of Solar on Brownfields

Leverage existing utility infrastructure to add revenue streams!

- Long-Term Lease Arrangements with a Solar Developer
- Renewable Energy Investment Tax Credits
- Potential for less strict regulatory closure criteria
NY Opportunities: Then and Now

Out with the Old, In with the New

- Past projects in NY took advantage of much higher NYSERDA incentives.

- The few remaining opportunities in NY under current incentives are those in the Hudson Valley, Westchester county, and the five NYC boroughs.

What does this mean for NY?

- Plenty opportunity remains!
  - 1600 closed landfills exist in New York State, while only 16 have renewable energy systems installed. That being said...

- Without additional opportunities and/or tariff adders for solar on contaminated lands, owners will miss out on these opportunities.
  - An incentive carve out is needed to cover the increased costs to construct landfill/brownfield projects, as has been evident in high-growth states like Massachusetts.
To date, the EPA has identified 213 renewable energy installations on 207 contaminated lands, landfills, and mine sites, with a cumulative installed capacity of just over 1,235 megawatts (MW).

Of these 213 installations, 123 are located in MA, NJ, NY, and CA, with CO as the next most populous state boasting 8 total installations.

Source: Environmental Protection Agency
Though currently ranking third (16), New York will struggle to sustain growth without providing a program incentive to develop on landfills or brownfields.
Scratching the Tip of the Iceberg

Total renewable energy installations on contaminated lands in the US.

Total installations on contaminated lands in NY, NJ, CA, and MA.

Total contaminated lands the EPA has prescreened for renewable energy development in the US (2016).

Source: Environmental Protection Agency
Opportunity – Two Main Structures

**Lease**
Landfill/brownfield owner leases the land to Soltage, Soltage sells electricity generated to third party

20+ year lease revenue

**PPA**
Energy savings to owner for 20+ years w/on-site PPA, or Remote Net Metering Contract

20+ years of electricity savings
Currently and through 2019, a federal tax credit worth 30% of the construction costs of solar projects is awarded to the project owner:

- In 2020, that credit begins to **step down** to **26%**, then **22%** and finally **10%** in subsequent years.
- Projects completed prior to these declines in the ITC will enjoy much stronger project economics
  - And, as a result, will provide higher accrual of value to solar customers
Process Timeline & Next Steps

- **PPA and Lease Agreements**: 3 months
- **Engineering & Permitting**: 9-18 months
- **Construction timeline**: 6-9 months
- **Project(s) Begin Operating**: 18-24 months total

- Identify sites and approach
- Project Benefits Quantified
- Sign Agreements
- Project Engineering/Permitting
- Interconnection Agreement
- Construction
- Commissioning
- Ribbon Cutting
- Project Benefits Begin
Select Soltage Projects on Brownfields & Landfills

**Republic - Randolph**
- 6.0 MW
- Randolph, MA
- 20 years

**Casella Waste; VEPP, Inc**
- 2.7 MW
- Coventry, VT
- 25 years

**Dow Chemical**
- 3.7 MW
- Billerica, MA
- 20 years

**Republic - Plainville**
- 4.8 MW
- Plainville, MA
- 20 years

**Bird Machine**
- 4.6 MW
- Walpole, MA
- 25 years
Thank You

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