Proposed Zoning Ordinance Text Amendment

Exeter Planning Board
January 23, 2018
Outline

- Tax Revenue
- Job Creation
- Potential Solar Sites
- Interconnection
- Statewide Building Permit
- Development Standards
- Landscaping/Screening
Benefits to Town through Tax Revenue

• Enhanced Tax Revenue Offer
  • State mandates $5,000/MW AC (MW = “Megawatts”)
  • Green proposes 40% more: $7,000/MW AC
  • Annual Revenue (68 MW AC): $476,000
  • 25 years = $11.9 million

• Enhanced Financial Benefit
  • Accelerated payments of $945,000
  • Increasing tax revenue by 40% over 25 years adds $3.4 million
Avoided Town Expenditures

- 65 MW in an R-4 Zone = 65 residential lots
- 65 lots at 1.5 children per house = 97 children
- 97 children in school system x $16,000 per student = $1.55 million per year in avoided school impact
Job Creation

- Green will reach out to Exeter businesses and residents for work on our projects
- Proposal will create roughly 300 local jobs during construction
  - Direct hire and subcontractor opportunities
- The above offer will be detailed in the final Tax Stabilization Agreement with the Town
All parcels with 27+ acres located wholly within six mile radius of the Lafayette Substation and wholly zoned RU-3 or RU-4.
Identification of parcels with development restrictions.

These parcels are not developable and need to be removed.

**Legend**

- **Town Line:** ----
- **Substation Radius:** White Circle
- **RU-3:** Yellow outline
- **RU-4:** Red outline

**Development Restrictions:**
- Conservation Easement, Open Space,
- Sold Development Rights: Maroon fill
- Golf Course: Light Blue fill
- National Grid-owned land: Light Pink fill
Removal of parcels with development restrictions

Legend
Town Line: ----
Substation Radius: White Circle
RU-3: Yellow outline
RU-4: Red outline
Option 2 (U/G Construction)

Underground feeder for 65 MW AC
Available parcels from National Grid’s interconnection extent.

The feeder can run six miles along Rt. 102 and a maximum along Rt. 2 to Exeter Road.

Parcels must be located within 1,000ft of the state highways.
Identifying approximate wetlands

Legend
Town Line: ----
Substation Radius: White Circle
RU-3: Yellow outline
RU-4: Red outline
Wetlands: Yellow fill
Removed parcels without impact from wetlands.
Option 2: New 115/34.5kV at Lafayette
Option 2B: Lafayette 115/34.5 kV Station (65 MW Max)

<table>
<thead>
<tr>
<th>Option</th>
<th>Transformer Size</th>
<th>O/H Ten Rod Rd</th>
<th>U/G Ten Rod Road</th>
</tr>
</thead>
<tbody>
<tr>
<td>2B</td>
<td>40 MVA</td>
<td>40 MW</td>
<td>50 MW</td>
</tr>
<tr>
<td></td>
<td>55 MVA</td>
<td>40 MW</td>
<td>65 MW</td>
</tr>
</tbody>
</table>

**Required Ring Bus Generation > 20MW**

(1) Circuit with (2) cables up to 55 MW of generation

May need 2\textsuperscript{nd} circuit & cable for generation > 55 MW
Option 2 (U/G Getaway)
Option 2 (U/G Construction)

- 2 35kV circuits each with (2) TG 1000 CU EPB on cable
  - Circuit 1 ~ 9,000 ft (to 13.5 MW site)
  - Circuit 2 ~ 26,000 ft (to 28.5 MW site)

- Manhole & ductline system with (6) 6-inch conduits (~38,000 feet)

- ~ 28.5 MW
- ~ 13.5 MW
### Summary of Costs

<table>
<thead>
<tr>
<th>Option</th>
<th>Construction Type</th>
<th>Capacity</th>
<th>Cost ($M)</th>
<th>$/MW ($M)</th>
<th>Manhole &amp; Ductline</th>
</tr>
</thead>
<tbody>
<tr>
<td>84T3 Feeder</td>
<td>O/H</td>
<td>40 MW</td>
<td>$13.000</td>
<td>0.325</td>
<td>N/A</td>
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<tr>
<td></td>
<td>O/H &amp; U/G</td>
<td>40 MW</td>
<td>$12.700</td>
<td>0.318</td>
<td>By Customer</td>
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<tr>
<td>Lafayette Sub (Straight Tap)</td>
<td>O/H</td>
<td>20 MW</td>
<td>$13.200</td>
<td>0.660</td>
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<tr>
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<td>U/G</td>
<td>20 MW</td>
<td>$12.400</td>
<td>0.620</td>
<td>By Customer</td>
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<tr>
<td>Lafayette Sub (Ring Bus w/ 40 MVA Transformer)</td>
<td>O/H</td>
<td>40 MW</td>
<td>$17.600</td>
<td>0.440</td>
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<tr>
<td></td>
<td>U/G</td>
<td>50 MW</td>
<td>$16.800</td>
<td>0.336</td>
<td>By Customer</td>
</tr>
<tr>
<td>Lafayette Sub (Ring Bus w/ 55 MVA Transformer)</td>
<td>U/G</td>
<td>65 MW</td>
<td>$17.300</td>
<td>0.295</td>
<td>By Customer</td>
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</tbody>
</table>
Statewide Solar Building Permit

- Law passed in 2017 and effective January 2018
- Regulates Town Building and Electrical Permits for Solar Energy
- Provides additional protection for Town
Development Standards – To be incorporated into Tax Stabilization Agreement

Requirements for Building Permit Application

A plan stamped by a Registered Land Surveyor showing;

- Location of panels and electrical components
- Location of pervious structural bearing gravel roads
- Security fencing a minimum of 12 feet off outer edge of array
- Compliance with all building setback requirements

A solar array visual screening plan prepared by a landscape architect showing;

- Rendering of proposed landscape screening buffer showing view(s) from public ways as it relates to the installed array.
- Cross section of proposed planted buffer indicating type and mature height of plant material
- Photographs of plant material proposed
- Maintenance plan for all screening material
Development Standards - Continued

Additional documentation required;

- RIPDES Permit
- Evidence of Fire Department approval of plan
- Product specification sheets for major equipment to include: racking, inverter, panels and transformer

Additional development standards

- All roadways to be of pervious structural bearing material
- Top of array not to exceed 15 feet in height
- In the case of contiguous lots, internal lot lines are not subject to setback requirements.
- All utilities on site from customer owned switch/common coupling will be installed underground.
Screening for Solar Arrays
Screening for Solar Arrays
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Conceptual Screening Cross-Section
Screening for Solar Arrays
Thank you

Questions?

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