Future of Power Generation and Electricity Grid
Who we are...

We provide the power you need to live the life you want – while continuing to lead the way to a safe, secure and responsible energy future.

We do this by:

– Listening carefully to you to make sure we’re providing the service and products you value and expect.
– Delivering affordable, reliable and cleaner energy while protecting the environment.
– Always improving our operations and developing smart, safe and innovative ways to serve you and your community.

<table>
<thead>
<tr>
<th>Region</th>
<th>Electric Customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carolinas</td>
<td>3.9 million</td>
</tr>
<tr>
<td>Florida</td>
<td>1.7 million</td>
</tr>
<tr>
<td>Midwest</td>
<td>1.6 million</td>
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</tbody>
</table>
Pearle Street Station, New York 1882
Where we’ve been...

Fully Centralized (all T&D with large central stations)

1900 1950 2000 2050

Fully Decentralized (all DG, Storage and load)

- PURPA (1978)
- August 14, 2003 Northeast Blackout
- TVA, REA, Hoover Dam
- Rolling Blackouts interest in DG
- Distributed Renewable Lower cost PV
- Edison Pearl Street Station (1882)
- First Microgrid
- First US use of AC Transmission (1886)

What is the future path?

Source: EPRI
Where we are going...

Communications and Information

A Highly Interconnected Power System that Optimizes Energy Resources Creating a Sustainable Future
What we are looking at...

[Diagram showing different technologies and their potential impact and time to significant impact.

- Solar PV
- UAS
- Wearables
- IoT
- LED Lighting
- Energy Storage
- EVs
- Fuel Cells
- Micro-grids
- Solid State Xfrms
- Big Data
- Google
- TOSIBA
- Panasonic
- TESLA
- Marwigan Engine Systems
- CHP
- Solar City
- nrg
- Gridbridge Systems
- Gridco Systems
- Honeywell
- Apple
- 72
- Toyoata
- BMW
- Ford
- Cooper Lighting
- Cree Lighting
- Bloom Energy
- Honda
- Amazon
- Cisco
- Bosch
- Intel]
Future Resources
Future Lineman
Choice is yours...

“Greatness is not primarily a matter of circumstance; greatness is first and foremost a matter of conscious choice and discipline”

Jim Collins & Morten Hansen, Great by Choice