EDF Group, through its subsidiaries in North America delivers results to utilities, commercial & industrial, and corporate purchasers through the procurement of renewable energy.

EDF Renouvelables is the global renewable energy affiliate of the Group. Present in 22 countries, under the brand EDF Renewables, the company develops, builds and operates renewable power plants.

EDF Renewables North America is one of the largest renewable energy developers in North America with 20 GW of wind, solar, storage and electric vehicle charging projects developed throughout the U.S., Canada, and Mexico.
Integrated Onsite Energy Solutions

Integrated Onsite Energy Solutions

6,000+ EV CHARGING STATIONS INSTALLED

350+ MW COMMERCIAL SOLAR

40+ MWh COMMERCIAL STORAGE

CONNECTED BY NEXT GENERATION LOAD MANAGEMENT

PROJECT DEVELOPMENT

TURNKEY EPC

EMS / NETWORK PROVIDER

FINANCING / INCENTIVE MGMT

ASSET MGMT / OPERATIONS
Our Vision: From Clean Microgrids to Utility 2.0

TODAY

Leading provider of onsite solar for corporates

#1 on large-scale EV charging

Advanced storage capabilities including islanding for microgrids

*Energy Management System with Adaptive Load Mgmt
Our Vision: From **Clean Microgrids** to **Utility 2.0**

**TOMORROW**

- Clean charging management of medium and heavy-duty EV fleets
- Large-scale commercial solar
- Aggregation of distributed assets into Virtual Power Plants
- Vehicle to grid integration
- Vehicle to Home integration
- Commercial microgrids with solar, storage and EV charging
Adaptive Load Management

- scheduled EV charging based on driver inputs to app
- reduced power capacity requirements
- 3-4x the chargers
- optimizes existing electrical infrastructure upgrades
- 60% reduction in energy costs
- optimal for full-shift parking (4-8 hours)
Adaptive Load Management

**WITHOUT ALM**
- 18 32A EVSEs on 150kW transformer per NEC 125% rule with no load management
- 225A CB

**WITH ALM**
- 72 32A EVSEs on 150kW transformer per NEC 125% rule with load management
- 225A CB

**What's the difference?**
Without ALM, all of the charging stations are powered at full speed at the same time.

**POWERFLEX OPTIMIZED INFRASTRUCTURE**
This is because with ALM, the power to each station is controlled individually in real-time, based on users' charging requirements and the facility's real-time power availability. This helps create "slack" in the power supply, allowing power to be used as efficiently as possible and increase the number of charging stations that businesses can install on the same amount of power.
The Case for Full-Shift EV Parking

“FULL-SHIFT” PARKING ALLEVIATES THIS ISSUE

“Can we reschedule this meeting? I have to move my car.”

10m to walk to car, re-park and walk back for both the first and the second drive

Lost productivity per “re-parking”: 20Mx255 working days = 85 hrs/yr

Across 1,000 EV chargers this translates to 85,000hrs

At $50/hr that’s $4,250,000/yr of lost productivity
## Different Cars, Different Needs

<table>
<thead>
<tr>
<th></th>
<th>Plug-in Hybrid (PHEV)</th>
<th>Small Battery EV</th>
<th>Large Battery EV</th>
<th>Tesla</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Range Anxiety</strong></td>
<td>Low</td>
<td>High</td>
<td>Med</td>
<td>Med</td>
</tr>
<tr>
<td><strong>Max L2 Charge Rate</strong></td>
<td>3.3kW – 6.6kW</td>
<td>6.6kW</td>
<td>6.6kW</td>
<td>15-20kW</td>
</tr>
<tr>
<td><strong>Electric Range</strong></td>
<td>10-30 mi*</td>
<td>60-120 mi</td>
<td>200+ mi</td>
<td>200+ mi</td>
</tr>
<tr>
<td><strong>Sessions / week</strong></td>
<td>5* sessions/wk</td>
<td>3-5 sessions/wk</td>
<td>2-4 sessions/wk</td>
<td>2-4 sessions/wk</td>
</tr>
<tr>
<td><strong>Energy / session</strong></td>
<td>5-15kWh</td>
<td>15-20kWh</td>
<td>20-40kWh</td>
<td>20-80kWh</td>
</tr>
<tr>
<td><strong>Considerations</strong></td>
<td>Need to plug in every day to maximize electric miles driven</td>
<td>Need to plug in nearly every day</td>
<td>Can skip charging multiple days in a row</td>
<td>Can skip charging multiple days in a row</td>
</tr>
</tbody>
</table>
ALM enables customers to expand the size of their charging facilities, **without having to upgrade service capacity**

### The Power of Adaptive Load Management: Workplace Case Study

**From 30 EVSE...**

<table>
<thead>
<tr>
<th>Nameplate kW</th>
<th>Building Peak Load</th>
<th>Total EVSE</th>
<th>Excess Capacity</th>
<th>Main Panel Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing w/o ALMS</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>With Powerflex ALMS</td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

**...To 168 EVSE**

**Existing**

**With Powerflex ALMS**
Field Observation: Mondays ~50% higher than midweek avg

Actual Power / Energy Delivered in one week
Single site, 168 L2s, 480V-800A MSB
Shaping the Load: UCSD Case Study
The Buck Institute for Research on Aging is an independent biomedical research institute that focuses on aging and age-related disease.

Following prior completion and operation of a 1 MW solar carport facility, they came back to EDF and Powerflex again when it was time to add EV chargers.

“EDF has always been number one, they’ve been responsive and a great partner and we hope to work with them on a new solar project we’re thinking about”

- Mike Madias – Senior Facilities Manager, Buck Institute
CASE STUDY

Workplace Charging

23andMe is a leading consumer genetics and research company that helps people access, understand and benefit from the human genome.

The company had plans to move to a new facility, 23andMe employees noted that the parking garage in their future building did not have enough EV chargers to support the already 60-plus EVs used by the staff. An employee referred management to Powerflex, which offered a turnkey solution to expand access to charging within the existing power capacity while managing the rebates and permitting process.

“All we had to do was restripe the parking garage”

-Jason Lester, Workplace Experience Team Director
Solar Eclipse: August 21, 2017

CAISO resource mix for August 21, 2017

Solar production during the eclipse compared to adjacent days

Storage & EV Smart Charging will solve the next eclipse on April 8th, 2024