Ford Pro Initial Scoping

2023

Southern Company

Commercialization Proposal

Purpose: The goal of the proof of concept is to facilitate a comprehensive understanding between Southern Company and Ford Pro on the advantages of EV fleet grid programs, while also addressing barriers hindering widespread EV adoption and support for the electric grid. The insights garnered from this initiative will be shared with internal leaders, supporting the development of a framework for EV fleet grid programs. This framework will serve as the foundation for scaling up initiatives with customers, fostering sustainable growth and innovation in the electric vehicle ecosystem.

Southern Applicability: Southern Company's involvement in the commercialization proposal with Ford Pro extends beyond participation; it represents a strategic collaboration intended to pioneer innovative solutions in the realm of EV Fleets. By integrating VG1 pilot testing into our existing fleet vehicles, we are not only exploring Demand Response and Dynamic rates but also forging a mutual relationship with Ford, serving as strategic thought partners. Our joint efforts in this pilot will have immediate benefits and also pave the way for the future design of fleet programs. Through this collaborative venture, we leverage our collective expertise to experiment, learn, and ultimately shape the future of vehicle and charger performance, as well as program design, benefiting both parties involved.

Key benefits:

- Gain crucial knowledge to shape EV fleet grid programs, enhancing fleet operations while maximizing benefits for both Southern and Ford Pro.
- Barrier Reduction: Identify and address technical and commercial obstacles, paving the way for smoother and more widespread adoption of EV fleets.
- Grid Support: Contribute to the resilience and efficiency of the electric grid by leveraging EV fleet grid programs to balance energy demand and supply.

Pilot Scope: Southern and Ford Pro intend to use the learnings from the proof of concept as a framework for an agreement on EV Fleet Grid programs, whereby Southern and Ford scale the EV Fleet Grid programs to common end customers.

Goals for the pilot include:

- Validate EV Fleet Grid program effectiveness including hourly price signals to influence load shifting
- Explore scalable program framework support from pilot learnings and monthly test cases
- Identify and overcome adoption hurdles based on technology capabilities and needs for EV fleets

Key Internal Stakeholder Groups:

- SoCo Planning and Regulatory Support, New Ventures, APC/GPC Fleet, R&D, and Legal
- Other informed groups for awareness: Grid Transformation, Energy Efficiency, National Accounts

Investment Justification

Strategic Relevance: Southern Company Pilot team and Fleet operations will get access to the Ford Pro software platform for a suite of fleet management tools including vehicle telematics. The software provides insights for operational efficiency through real-time GPS tracking and proactive maintenance management, reducing downtime and optimizing resource allocation. Insights into fuel efficiency and driver behavior enable cost reduction measures while promoting a culture of safety within the fleet.

Funding Entity: New Ventures

Expected Return / Upside Expected cost savings from reduced fuel and maintenance expenses(already considered in Fleet planning) but also lays the foundation for understanding future energy needs through features like testing demand response and dynamic rates. Employees benefit from improved vehicle performance and safety measures, while insights into driver behavior facilitate personalized training and development programs for workforce. The learnings from the pilot will help tell our story to customers to accelerate Fleet adoption and support program design across the system.

Investment Pros:

- **Pro 1:** Opportunity to gauge the overall value of the system in terms of its impact on operations, cost-effectiveness, and alignment with the company's broader goals and objectives.
- **Pro 2:** By testing features like dynamic rates and managed charging capabilities, Southern Company can assess the impact on potential customer satisfaction and help customers with EV fleet adoption.
- **Pro 3:** Evaluation of the software's effectiveness in optimizing vehicle performance, monitoring driver behavior, and reducing maintenance costs, providing valuable data for future decision-making

Investment Risks:

- **Risk 1:** Complexities of simulating dynamic rates with vehicle data to demonstrate a customer experience. This is a manual process, and we will not be able to incorporate OpenADR
- **Risk 2:** Southern Company and Ford Pro have an opportunity to move beyond pilot phase and explore new technology solutions that may not exist today. (V2B capabilities, etc)

Resource Plan

Monetary Resources:

- The pilot provides access to the Ford Pro software platform for APC and GPC Fleet Operations, for annual software subscriptions
- The full cost of the pilot will be funded by New Ventures. Following the paid pilot, platform access will need to be funded from other budgets across the organization

Staffing Resources:

- It is expected that the project will be supported part time by both New Ventures and PARS, along with consulting/informing internal business partners
  - New Ventures will support internal initiatives by facilitating feedback collection and fostering communication both within the organization and with external stakeholders.
  - Planning & Regulatory Support as key stakeholders in the pilot, will collaborate closely to achieve monthly executive milestones as outlined below.

Southern Company Pilot Champions:

- Planning & Regulatory Support
- New Ventures
- APC Fleet Management
- GPC Fleet Management
- R&D
- Legal

Additional Southern Company Internal Partners for Awareness and Input:

- APC System Planning
- SCS Electric Transportation
- National Accounts
- VaDER – Distributed Energy Resource Team
- System EV Committee

Fleet Resources:

- The Fleet Operations team will be allowing the use of Ford Pro chargers and Ford Pro lightnings to be leveraged for the pilot duration

Ford Pro Fleet V1G Pilot and Timeline

Purpose: The goal of this proof of concept is to understand the benefits of EV fleet grid programs between Southern Company and Ford Pro. It aims to identify and overcome barriers to fleet EV adoption and grid support. The insights will be shared internally to develop a scalable framework for EV fleet grid programs, ultimately helping customers and promoting sustainable growth and innovation in the EV ecosystem

Key benefits:

- Gain crucial knowledge to shape EV fleet grid programs, enhancing fleet operations while maximizing benefits for both Southern and Ford Pro.
- Identify and address technical and commercial obstacles, paving the way for smoother and more widespread adoption of EV fleets.
- Understand the potential to the resilience and efficiency of the grid by testing EV fleet vehicles and inform customer programs that support the grid.

Creating a Test Bed with Southern Fleet

Identify Southern Charging Fleet Depots

- 155 active chargers across multiple GPC & APC locations

Goals for the pilot include:

1. Validate EV Fleet managed charging program effectiveness including hourly price signals to influence load shifting

2. Explore scalable program framework support from pilot learnings and monthly test cases

3. Identify solutions to overcome adoption hurdles based on technology capabilities and needs for EV fleets

Phased Managed Charging Platform Rollout

1. Dynamic Pricing
Integrate with rate engine and implement with EV fleet, including pricing notifications to the pilot lead and shared with internal stakeholders

2. **Demand Response**
Integrate with manual process and implement with EV fleet

3. **Pathway to Customer Offering**
Evaluate joint marketing to customers to opt into the commercial EV dynamic pricing and demand response pilot program.

