EV Charging at Penn State

SSAC Recommendation Case Study
Background

- OPP EV charging stations for Nissan Leafs
- No public EV charging stations at Penn State
  - Closest is Steetz on Atherton St.
- PSU electricity sources - sustainable?
Background
Timeline

- Spring 2014
- Fall 2014
- Spring 2015
- Fall 2015
- Spring 2016
- Future
Spring 2014

- Consulted with OPP, Transportation Services
  - Were in favor
  - Identified challenges, barriers
  - How to best create plan for success?

- Recommendation created, presented to VPs
  - Identified need for EV charging stations, barriers/challenges
  - Called for “EV Task Force”
Electric Vehicle (EV) Charging Stations

- Many Penn State entities want stations
  - Student use, faculty use, University vehicle use, etc.
    - Dependent on location and what specific groups want to do with it

- Minor limitations

- Different entities require overarching guidelines
EV Charging Stations Future

● Requires rollout plan that continuously matches demand
  ○ Will unite PSU groups looking to implement stations

● Collaboration required between entities, needs structure for success
Recommendation

- EV Station Implementation Task Force
  - Representatives of PSU departments that want EV Stations
  - Representatives of departments that can get it done sustainably
  - Decide when/where/what type of stations implemented for now and for the future
Timeline

- Spring 2014
- Fall 2014
- Spring 2015
- Fall 2015
- Spring 2016
- Future
Fall 2014

- Draft of Policy BS 21 - Procurement and Use of Electric Vehicle Charging Stations at University Park
  - Electricity must come from renewable source
  - EV Committee
  - Sought student feedback
- SSAC invited to Student Transportation Commission
  - Dylan, Kayla served as reps
- Recommended continued support from VPs
Timeline

- Spring 2014
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- Spring 2015
- Fall 2015
- Spring 2016
- Future
Spring 2015

- Policy BS 21 Finalized
  - Made its way up through administration
- Recommended for approval from VPs
EV Charging Station Policy

- Policy was developed by Transportation Services, reviewed by SSAC, and is in process of approval.
  - Final approval from Administration and continued support for implementation after approval.
Timeline

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- Fall 2015
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Fall 2015

- Policy BS 21 officially adopted September 21, 2015
  - [https://guru.psu.edu/policies/psu/BS21.html](https://guru.psu.edu/policies/psu/BS21.html)
- Nittany Lion Inn Parking Deck Pilot Project
  - Public stations
  - Deal with Tesla
- OPP planned EV stations for Nissan Leaf fleet vehicles
- Both powered by solar array(s) near OPP
- First Meeting of EV Committee September 28, 2015
- Recommended continued support from VPs
Timeline

- Spring 2014
- Fall 2014
- Spring 2015
- Fall 2015
- Spring 2016
- Future
Spring 2016

- **Nittany Lion Inn Parking Deck Pilot Project**
  - Risk Management with Tesla deal - project postponed
  - Restructured deal out to RFP

- **ITS Data Center**
  - EV stations at Data Center and Computer Building

- **Second Meeting of EV Committee March 2, 2016**
  - Discussed future opportunities for solar/EV station network expansion, funding model
Timeline

- Spring 2014
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- Spring 2015
- Fall 2015
- Spring 2016
- Future
Future

● Nittany Lion Inn Parking Deck Pilot Project
  ○ Contract working through Summer 2016
  ○ Installation during 2016 - 2017 school year

● PSU fleet & service vehicle purchases
  ○ Incentive for electric vehicles (currently Nissan Leaf)

● Large scale solar array
  ○ PSU emission reduction goals
    ■ 35% below 2005 baseline by 2020
  ○ EV stations, extended payback period help finance
    ■ Cost to consumers is < equivalent tank of gas
PSU Emission Reduction Strategy

Source: Penn State University
EV Charging Stations

Extended Payback Periods

Large Scale Solar Array

Emission Reduction Goals

PSU Fleet Vehicle Purchasing