Outline

• Program Introduction
• Evaluation Objectives
• Methodology
• Preliminary Survey Results
• Takeaways
Program Introduction
Electric Vehicles 101

Zero-emission vehicles

All-battery electric vehicle (BEV)

Plug-in hybrid electric vehicle (PHEV)

Fuel-cell electric vehicle (FCEV)

(Center for Sustainable Energy, 2016)
The Role of Dealerships in EV Market Development

Of the visits to dealerships with at least one EV on the lot, volunteers indicated that only about 50% of the salespeople they spoke with provided information on how to fuel the EV while traveling.

Many who work at dealerships may not have much experience in dealing with EVs.

Buyer satisfaction with the new vehicle purchase experience:
- Plug-in Vehicle Buyer (non-premium segment, N=768)
- Conventional Vehicle Buyer (non-premium segment, N=4,658)
- Conventional Vehicle Buyer (premium segment, N=8,807)
- Tesla (premium segment, N=168; California data unavailable)

(Sierra Club, 2016)

(Cahill & Davies, 2014)

(Kress, 2015)
What is CHEAPR?

• The Connecticut Hydrogen and Electric Automobile Purchase Rebate (CHEAPR) program offers rebates for new, eligible electric vehicles purchased since May 2015

• The CHEAPR program includes two types of incentives for each eligible vehicle:
  – Vehicle Rebate (up to $5,000)
  – Dealer Incentive ($300)
Dealership Role

Dealerships play a crucial role in the CHEAPR program to:

• Guide consumers through the online application process

• Collect and submit all supporting documentation

• Support EV adoption in the state of Connecticut
Evaluation Objectives
Does the dealer incentive work?
Evaluation Objective

To develop an understanding of how the CHEAPR dealer incentive is distributed and used by dealerships, and whether it is an effective method for promoting the development of the EV market
Evaluation Questions

1. How is the dealer incentive being distributed within dealerships?
2. How and to what extent does the incentive motivate dealership employees to increase EV sales?
3. What behaviors do dealership employees change in response to the dealer incentive? How strong is the effect?
4. To what extent does the dealer incentive affect EV sales?
5. At what level should the dealer incentive be set to balance cost and effectiveness?
Evaluation Questions

1. How is the dealer incentive being distributed within dealerships?

2. How and to what extent does the incentive motivate dealership employees to increase EV sales?

5. At what level should the dealer incentive be set to balance cost and effectiveness?
Methodology
Evaluation Design – Mixed Methods

- Program Data Analysis
- Informal Interviews
- Survey
- Quantitative Analysis
- Qualitative Analysis
- Integration
Survey Data

• Individuals represented
  – Survey distributed to all dealership email addresses on file from CHEAPR applications (N=269)
  – Emails represent variety of positions at dealerships
  – Response rate of 30% (n=81)

• Dealerships represented
  – Invitations distributed among 88 dealerships
  – Responses received from 56 dealerships (64%)
  – 1–3 respondents per dealership
Preliminary Survey Results
Survey Respondents

Which of the following most closely matches your job title?

- Salesperson/Sales Consultant: 17
- General Sales Manager: 17
- General Manager: 13
- Finance & Insurance Manager: 7
- Other: 6
- Business Manager: 6
- Controller: 5
- Dealer Principal: 5
- Internet Sales Manager: 4
- Accountant: 1

Office Manager (3), Sales Manager (2), Accounting Clerk.
What makes are sold at your dealership?
Survey Respondents

- 74% are directly involved in selling vehicles to customers → “Sales employees”
- 65% are responsible for supervising or managing sales employees
- 23% have owned/leased an EV personally

![Bar chart showing how many EVs have been sold or leased to customers.]

- 21 respondents not a sales employee
- 16 respondents sold 1–5 EVs
- 9 respondents sold 6–10 EVs
- 15 respondents sold 11–15 EVs
- 3 respondents sold 16–20 EVs
- 16 respondents sold more than 20 EVs
How is the dealer incentive being distributed within dealerships?
At your dealership, how much of the dealer incentive does the salesperson responsible for the sale receive?†

- 69%: None
- 15%: Less than half
- 11%: About half
- 5%: More than half
- 5%: All of it

Though 95% of respondents said they were at least moderately familiar with CHEAPR, 27% of all respondents and 31% of sales employees were not aware of the dealer incentive at the time of the survey.

†Respondents=55
Question only asked of respondents who said they were aware of the dealer incentive
“I don’t know” responses excluded
How and to what extent does the incentive motivate dealership employees to increase EV sales?
How and to what extent does the incentive motivate dealership employees to increase EV sales?

To what extent are you motivated by the current dealer incentive to do each of the following?

<table>
<thead>
<tr>
<th>Activity</th>
<th>Not at all motivated</th>
<th>Slightly motivated</th>
<th>Moderately motivated</th>
<th>Very motivated</th>
<th>Extremely motivated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spend time learning about EVs</td>
<td></td>
<td></td>
<td>3.37</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spend time teaching other staff about EVs</td>
<td></td>
<td></td>
<td>3.40</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spend time with a customer to teach them about EV ownership and use‡</td>
<td></td>
<td></td>
<td>3.67</td>
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<td></td>
</tr>
<tr>
<td>Try to convert customers interested in conventional vehicles to EVs‡</td>
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<td></td>
<td>3.40</td>
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<tr>
<td>In general, try to sell more EVs</td>
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Respondents=57
‡Sales employees only; respondents=40
Only those who were aware of dealer incentive
To what extent are you motivated to do each of the following? – Sales Employees

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<th>Activity</th>
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<th>If $300 Received Personally</th>
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<tbody>
<tr>
<td>Spend time learning about EVs</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Spend time teaching other staff about EVs</td>
<td></td>
<td>*</td>
</tr>
<tr>
<td>Spend time with a customer to teach them about EV ownership and use</td>
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<td>*</td>
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<td>Try to convert customers interested in conventional vehicles to EVs</td>
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Sales employees only
Respondents=40
*Statistically significant difference ($p < 0.05$)
To what extent are you motivated to do each of the following? – Sales Employees

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*Receive no part of incentive
*Receive any part of incentive

Sales employees only
Respondents=37
*Statistically significant difference (p < 0.05)
At what level should the dealer incentive be set to balance cost and effectiveness?
## Minimum Dealer Incentive Recommendations

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Median</th>
</tr>
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<td>What is the minimum dealer incentive amount <strong>salespeople</strong> would need to receive personally to motivate them to increase their EV sales? <em>(n=76)</em></td>
<td>$233</td>
<td>$0</td>
<td>$500</td>
<td>$200</td>
</tr>
<tr>
<td>What is the minimum dealer incentive amount <strong>salespeople</strong> would need to receive personally to motivate them to increase their EV sales? —<strong>Sales employees</strong> <em>(n=56)</em></td>
<td>$236</td>
<td>$0</td>
<td>$500</td>
<td>$200</td>
</tr>
<tr>
<td>Additionally, what is the minimum dealer incentive amount that would motivate your <strong>dealership</strong> to increase your EV sales? <em>(n=73)</em></td>
<td>$565</td>
<td>$0</td>
<td>$5,000</td>
<td>$500</td>
</tr>
<tr>
<td>Additionally, what is the minimum dealer incentive amount that would motivate your <strong>dealership</strong> to increase your EV sales? —<strong>Dealer principals, (vice) presidents, controllers, and general managers</strong> <em>(n=20)</em></td>
<td>$623</td>
<td>$0</td>
<td>$5,000</td>
<td>$500</td>
</tr>
</tbody>
</table>
Additional Learnings
How much do you disagree or agree with the following? —All Employees

<table>
<thead>
<tr>
<th>Statement</th>
<th>Not Owned</th>
<th>Owned</th>
</tr>
</thead>
<tbody>
<tr>
<td>EVs are a smart financial decision.</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>EVs are an effective way for drivers to reduce their environmental impact.</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>There aren't many perks to owning an EV.</td>
<td>Disagree</td>
<td>Neither agree nor disagree</td>
</tr>
<tr>
<td>It is inconvenient to have an EV be your primary vehicle.</td>
<td>Disagree</td>
<td>Neither agree nor disagree</td>
</tr>
<tr>
<td>EVs are the future of the new car market.</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
<tr>
<td>I personally prefer conventional vehicles over EVs.</td>
<td>Agree</td>
<td>Strongly agree</td>
</tr>
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</table>

Respondents=77
*Statistically significant difference ($p < 0.05$)
To what extent are you motivated by the current dealer incentive to do each of the following? –All Employees

![Bar chart showing motivation levels for different tasks]

- **Spend time learning about EVs**
  - Not at all motivated
  - Slightly motivated
  - Moderately motivated
  - Very motivated
  - Extremely motivated

- **Spend time teaching other staff about EVs**
  - Not at all motivated
  - Slightly motivated
  - Moderately motivated
  - Very motivated
  - Extremely motivated

- **Spend time with a customer to teach them about EV ownership and use**
  - Not at all motivated
  - Slightly motivated
  - Moderately motivated
  - Very motivated
  - Extremely motivated

- **Try to convert customers interested in conventional vehicles to EVs**
  - Not at all motivated
  - Slightly motivated
  - Moderately motivated
  - Very motivated
  - Extremely motivated

- **In general, try to sell more EVs**
  - Not at all motivated
  - Slightly motivated
  - Moderately motivated
  - Very motivated
  - Extremely motivated

**Respondents=57; only those who were aware of dealer incentive**

†Sales employees only; respondents=39

*Statistically significant difference (p < 0.05)
Takeaways
Lessons Learned for Program and Evaluation Design

• Program design broadly
  – Development of program theory critical during the early stages of program design
  – Stakeholder input can help optimize program design

• Program design for incentivizing dealerships to sell EVs
  – Need to explicitly identify target population for incentive to optimize design and delivery
  – Opportunities around EV use and experience

• Evaluation design
  – To inform design, process/implementation evaluation is essential
  – Process/implementation evaluation is no less essential for internal evaluations
Next Steps

• “By dealership” analysis
• Qualitative data analysis and integration
• Making meaning with staff and stakeholders
• Sharing results
Citations


