

**ELECTRIC VEHICLE**

# **NEW MEXICO**

**Investor-Owned Utilities**

**Transportation Electrification Plan**

**Comparison**



# Background

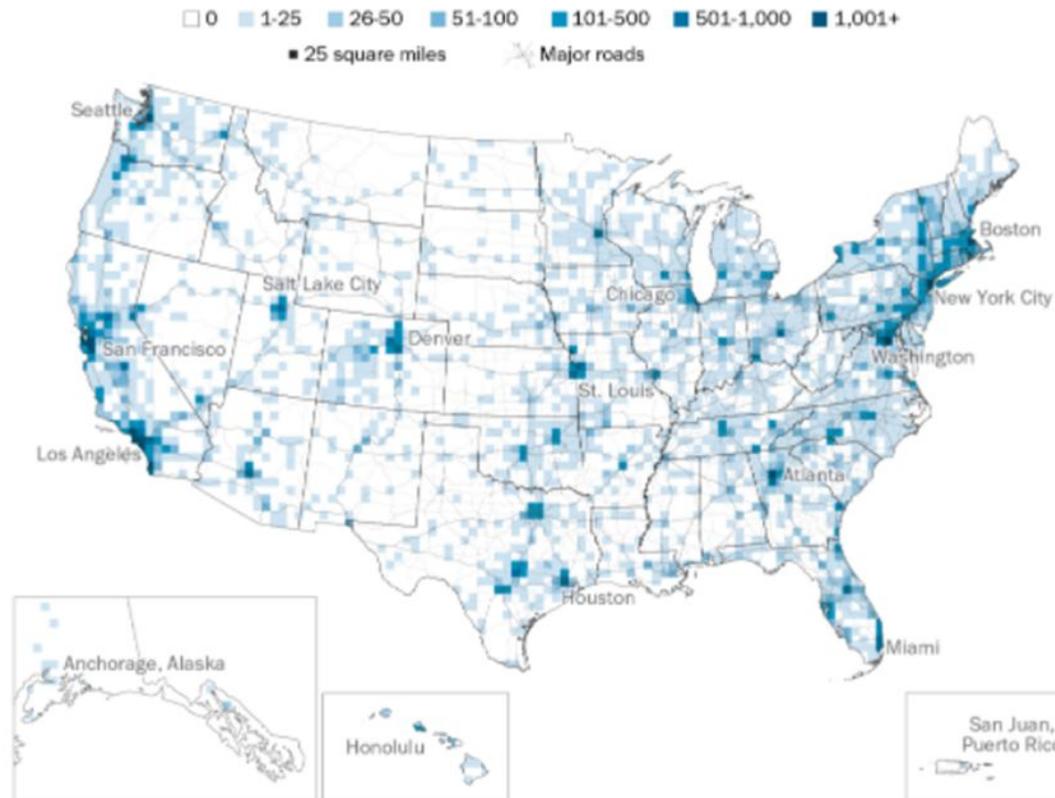
- New Mexico signed into law Statute 62-8-12 ([NM Stat § 62-8-12 \(2019\)](#))
  - The statute required all Investor-owned utilities (IOUs) that serve New Mexicans to submit a Transportation Electrification Plan (TEP) to the Commission.
- Main Goals of the Statutory Mandate:
  - Increase Charging Infrastructure in New Mexico.
  - Lower Barrier to Entry into EV market, especially for Low-to-Moderate income households (LMI).
  - Provide Customer Education on Electric Vehicles (EVs).
  - Facilitate EV Public transit and fleet vehicles.
  - Incentivize EV adoption through rate design options that offer savings on cost of power to charge EV.
  - Provide Rate Design options that promote charging during off-peak hours.
  - Lower New Mexico's Carbon Footprint.
- New Mexico's three IOUs:
  - El Paso Electric Company (EPE)
  - Public Service Company of New Mexico (PNM)
  - Southwestern Public Service Company (SPS)

# Why EV Charging Infrastructure is Needed

- In a recent Pew Research Center survey<sup>1</sup>, 7% of U.S. adults said they currently have an electric or hybrid vehicle, and 39% said they were very or somewhat likely to seriously consider buying an electric vehicle.
- EV sales grew 76% year over year in Q1 2022. EV market share jumped from 2.5% of sales in Q1 2021 to 5.2% in Q1 2022.

## Electric vehicle charging outlets mostly concentrated in large U.S. cities

Number of public charging outlets, May 2021

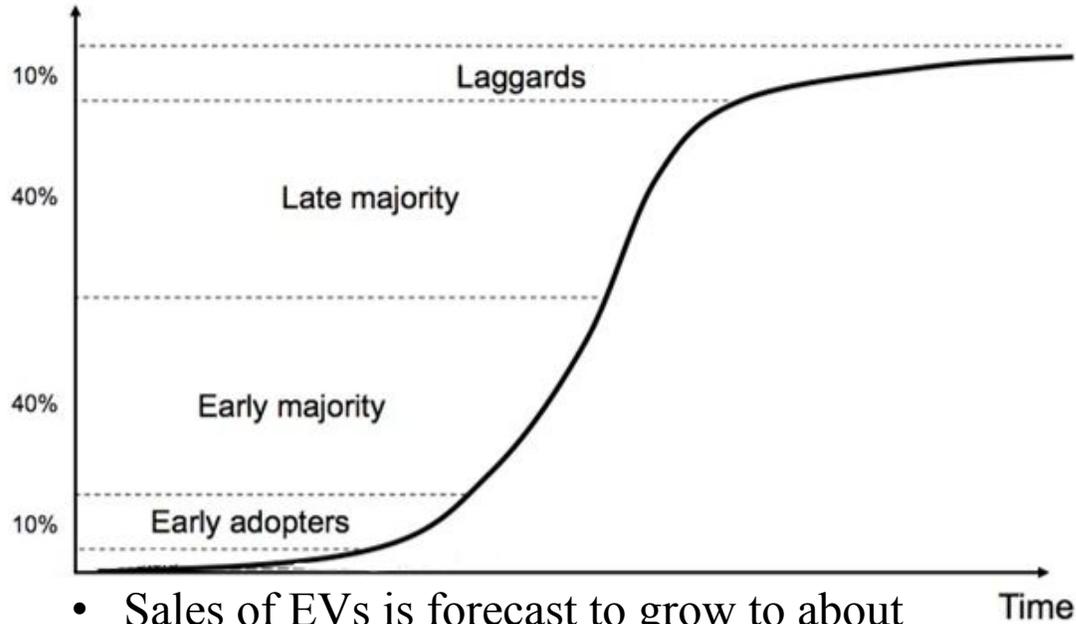


Note: Data accessed May 25, 2021. Figures refer to publicly accessible stations with Level 2 or DC Fast chargers.  
Source: U.S. Energy Department, Alternative Fuels Data Center, Census Bureau.

PEW RESEARCH CENTER / GRAPHIC BY ALISSA SCHELLER

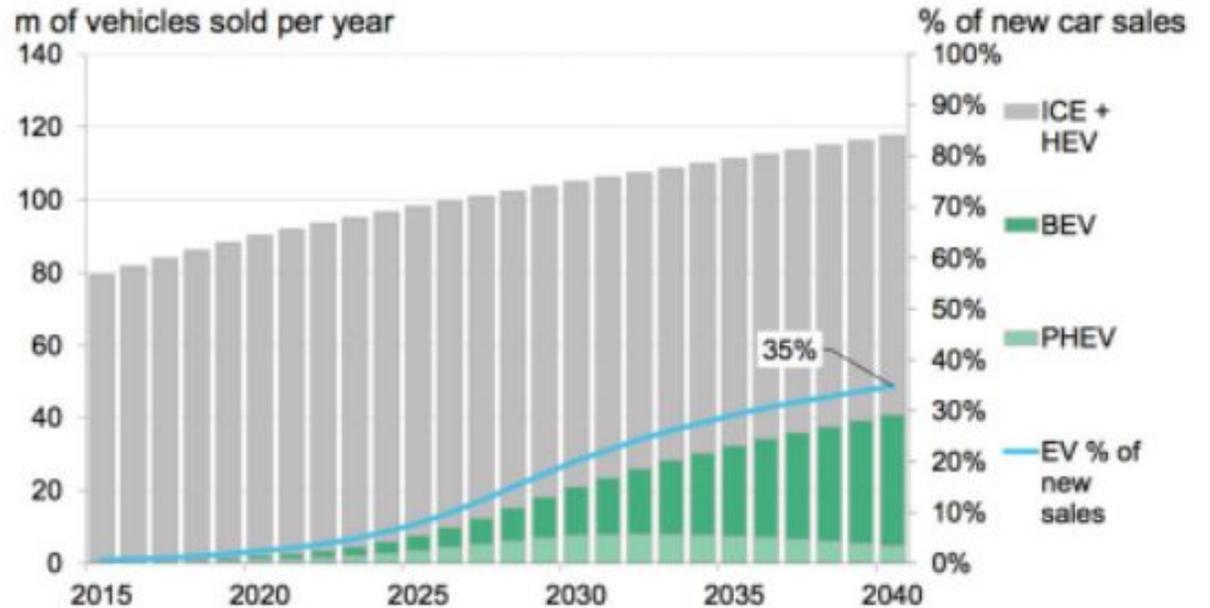
# Electric Vehicle Adoption: S-Curve

Penetration of Target Market



- Sales of EVs is forecast to grow to about 41 million in 2040.
- That will put total EV ownership at about a 25% of the global fleet.
- This forecast implies, by 2040, EVs will account for 35 percent of new vehicle sales, which means adoption will be in the “Early Majority” phase of the traditional S-Curve model in 2040.

Figure 1: Global LDV and EV yearly sales, 2015 – 2040 (m vehicles sold per year, %)



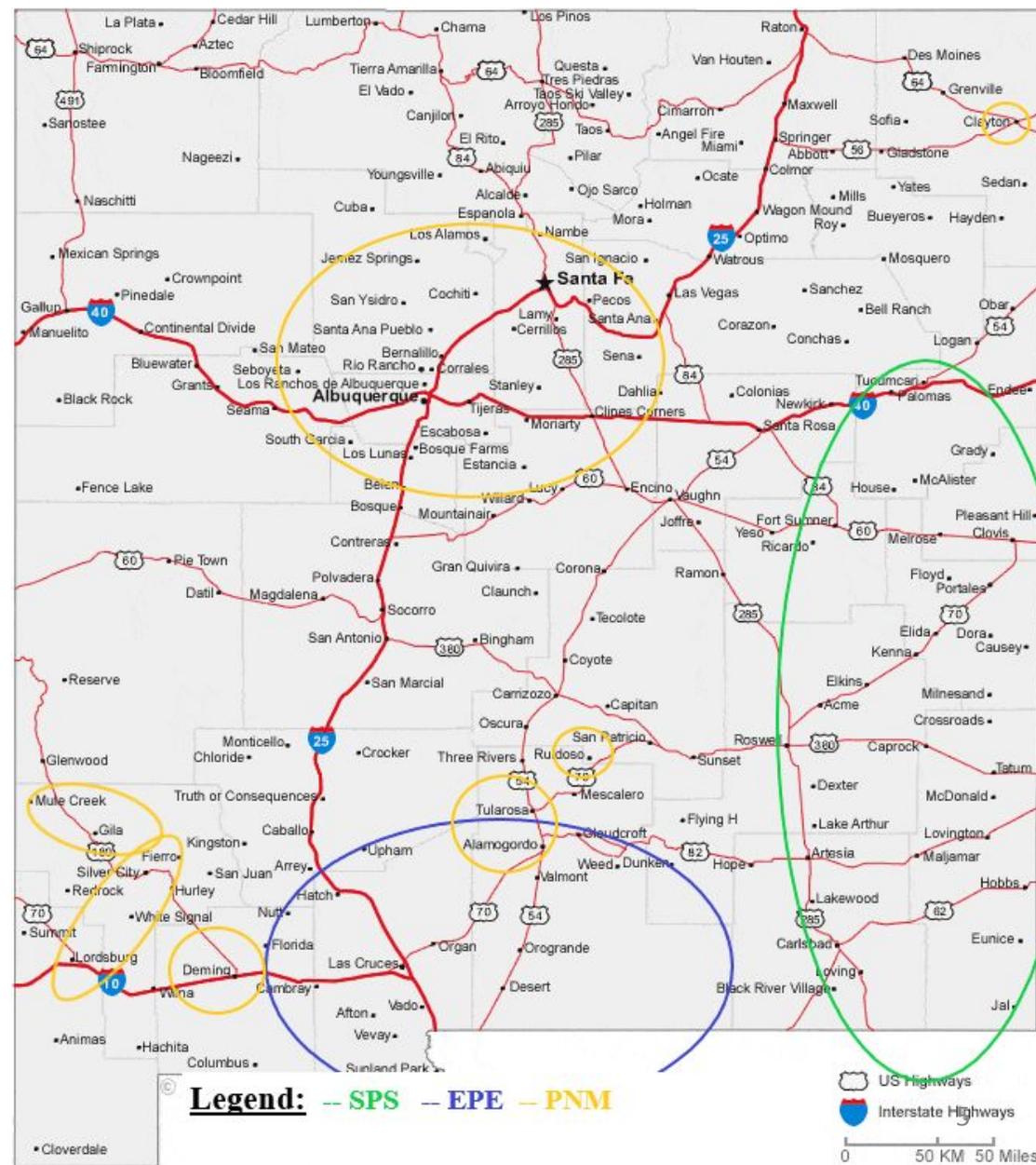
Source: Bloomberg New Energy Finance Note: ICE+HEV = internal combustion engine and hybrid vehicles, BEV = battery electric vehicles, PHEV = plug-in hybrid electric vehicles.

Reference 3

# New Mexico's Investor-Owned Utilities

- Between Southwestern Public Service Company (SPS), Public Service Company of New Mexico (PNM), and El Paso Electric Company (EPE) the IOUs serve about 74% of New Mexico's Residential Customers.

Rough Outline of NM IOUs Service Territory



# New Mexico IOU's Descriptive Statistics

While all three IOUs TEP's share commonalities, there are subtle differences between the plans that reflect the unique service areas and customers each utility serves.

PNM Overview (Approximate)		
1	Estimated EVs in NM as of 2021 (PNM Estimate)	3,300
2	Total Residential Customers in NM	825,283
3	Total Residential Customers Served	479,113
4	Customer Density Per Square Mile	99
5	Current EVs in Service Area (PNM Estimate)	2,800
6	Projected EVs by June 2023 (PNM S-Curve Estimate)	7,800
7	Residential Market Share NM (3)÷(2)	58%
8	Percent of NM EV Market Share Served (7)÷(1)	85%

PNM serves the most residential customers of the three IOUs with the highest customer density and the largest EV market share served.

SPS Overview (Approximate)		
1	Estimated EVs in NM as of 2021 (PNM Estimate)	3,300
2	Total Residential Customers in NM	825,283
3	Total Residential Customers Served	90,651
4	Customer Density Per Square Mile	11
5	Current EVs in Service Area (SPS Estimate)	143
6	Projected EVs by June 2023 (SPS Estimate)	390
7	Residential Market Share NM (3)÷(2)	11%
8	Percent of NM EV Market Share Served (7)÷(1)	4%

SPS serves more rural areas of NM as indicated by their customer density, this is reflected in their TEP further detailed in subsequent slides.

EPE Overview (Approximate)		
1	Estimated EVs in NM as of 2021 (PNM Estimate)	3,300
2	Total Residential Customers in NM	825,283
3	Total Residential Customers Served	85,891
4	Customer Density Per Square Mile	26
4	Current EVs in Service Area (EPE Estimate)	242
5	Projected EVs by June 2023 (EPE S-Curve Estimate)	545
6	Residential Market Share NM (3)÷(2)	10%
7	Percent of NM EV Market Share Served (7)÷(1)	7%

EPE's service area includes more densely populated areas than SPS, but less than PNM.

# Commonalities Between all NM TEPs

## **General:**

- Program Administration Budget
- Budget Flexibility ranging from 15% to 25% to accommodate a program that is directed at an uncertain, novel and rapid growing market.

## **Residential Incentives:**

- Rebates for installation and/or purchase of level 2 chargers.
- Rate programs – time of use with lower power costs or rebate (SPS).
- Provisions directly targeted at Low to moderate income households (20-28% of budget).

## **Commercial/Community:**

- Public Fast charging (DCFC) infrastructure.
- Multi-Family Unit Rebates
- Community outreach/education programs.
- Fleet/Public Transit Rebates (EPE & PNM)

# Budget Roll-Up Comparison

Southwestern Public Service Company Executive Summary (3 Year Plan)				
Program/Class	No. of Customers	Amount (\$)	Number of Rebates	Percent of Total Budget
Residential	90,651	\$ 405,000	185	13%
Non-Residential	26,349	\$ 2,264,000	9	71%
Customer Outreach		\$ 350,000	-	11%
Admin & General		\$ 150,000	-	5%
Budget Target (W/O Flexibility)		\$ 3,169,000	-	80%
Budget Flexibility Amount (25%)		\$ 792,250	-	20%
<b>Total</b>	<b>117,000</b>	<b>\$ 3,961,250</b>	<b>194</b>	<b>100%</b>
Public Service Company of New Mexico Executive Summary (2 Year Plan)				
Program/Class	No. of Customers	Amount (\$)	Number of Rebates	Percent of Total Budget
Residential	479,113	\$ 2,250,000	4,050	20%
Non-Residential	50,887	\$ 4,450,000	510	39%
Customer Outreach		\$ 1,000,000	-	9%
Admin & General		\$ 1,463,000	-	13%
Budget Target (W/O Flexibility)		\$ 9,163,000	-	80%
Budget Flexibility Amount (25%)		\$ 2,290,750	-	20%
<b>Total</b>	<b>530,000</b>	<b>\$ 11,453,750</b>	<b>4,560</b>	<b>100%</b>
El Paso Electric Company Executive Summary (2 Year Plan)				
Program/Class	No. of Customers	Amount (\$)	Number of Rebates	Percent of Total Budget
Residential	85,891	\$ 254,800	224	21%
Non-Residential	11,657	\$ 529,500	32	43%
Customer Outreach		\$ 250,000		20%
Admin & General		\$ 83,000		7%
Budget Target (W/O Flexibility)		\$ 1,117,300		90%
Budget Flexibility (+15% to Rebate)		\$ 117,645		10%
<b>Total</b>	<b>97,548</b>	<b>\$ 1,234,945</b>	<b>256</b>	<b>100%</b>

## Key Takeaways:

- SPS has focused 71% of budget on public charging stations. Logical given their service territory is less densely populated and has charging gaps.
- SPS's plan is a three-year plan.
- SPS has a 25% budget contingency & can move funds between the various programs which is capped at 150% of original budget.
- EPE & PNM are two-year plans.
- EPE's budget flexibility is only available to the rebate budget.

# PNM In-Depth Budget Sub-Categories

Budget Sub-Categories			
PNM Budget By Category (2-year plan)	Rebates Budgeted	Rebate Amount	Total Budget
<b>Residential</b>			
Level 2 Charger Purchase Cost Rebate	3,900	\$ 500	\$ 1,950,000
LMI Level 2 Installation Rebate	150	\$ 2,000	\$ 300,000
<b>Commercial/Community Installation Rebates</b>			
DCFC (Behind the Meter, 50kW)	70	\$ 25,000	\$ 1,750,000
Level 2 Ports (Public and Workplace)	360	\$ 2,500	\$ 900,000
Multi-Family Units (Level 2, Non-LMI)	40	\$ 2,500	\$ 100,000
LMI Area Multi-Family Units (Level 2)	40	\$ 5,000	\$ 200,000
Mass Transit (Two stops within 1 mile of LMI area)	-	-	\$ 1,500,000
<b>Customer Outreach</b>	-	-	\$ 1,000,000
<b>Administration</b>	-	-	\$ 1,463,000
<b>Budget Flexibility (25%)</b>	-	-	\$ 2,178,250
<b>Total</b>	<b>4,560</b>	<b>\$ 37,500</b>	<b>\$ 11,341,250</b>

## Key Takeaways:

- LMI customers can stack purchase and installation costs rebate.
- LMI do not need a smart charger.
- Only utility to incorporate a Mass Transit program to support an EV public transit system with directives specifically targeted at LMI communities.
- All public charging stations are “behind the meter”.
- PNM’s whole home electric vehicle (“WHEV”) rate is available to 4,000 customers, which offers lower energy costs between 10pm-5am.
- WHEV opt-in customers will have a smart meter installed.

# SPS In-Depth Budget Sub-Categories

SPS Budget By Category (3 Year Plan)	Rebates Budgeted	Rebate Amount	Total Budget
<b>Residential</b>			
Wiring Rebate	165	\$ 500	\$ 85,000
LMI Wiring Rebate	20	\$ 1,300	\$ 27,000
Home Charging Service	105	-	\$ 82,000
EV Optimization (Load Management, \$50 Credit)	185	-	\$ 15,000
<b>Commercial</b>			
DCFC (Behind the meter)	9	\$ 53,000	\$ 477,000
DCFC (Fully Owned by SPS)	8	-	\$ 1,328,000
<b>Customer Outreach</b>	-	-	\$ 350,000
<b>Evaluation</b>	-	-	\$ 150,000
<b>Admin/O&amp;M</b>	-	-	\$ 655,000
<b>Budget Flexibility (25%, &amp; Intra-Portfolio Flexibility)</b>	-	-	\$ 792,250
<b>Total</b>	<b>492</b>	<b>\$ 54,800</b>	<b>\$ 3,961,250</b>

## Key Takeaways:

- Rebate is for installation
- Must enroll in TOU rate or the EV optimization rate.
- EV optimization rate provides time slots to charge EV, customers enrolled receive annual \$50 bill credit.
- Home charging service where a level two charger installed in residence and is fully owned and maintained by SPS for a flat monthly fee.
- SPS plans to provide infrastructure for 8 public fast chargers fully owned and operated by SPS
- 9 behind the meter public charging stations, charging equipment owned by site hosts

# EPE In-Depth Budget Sub-Categories

<b>EPE Budget By Category (2 Year Plan)</b>			
<b>Residential</b>	<b>Rebates Budgeted</b>	<b>Rebate Amount</b>	<b>Total Budget</b>
Purchase Rebate (LVL2, Networked Charger)	168	\$ 500	\$ 84,000
LMI Installation (LVL2, Networked Charger)	56	\$ 2,300	\$ 128,800
<b>Commercial/Community Installation Rebates</b>			
Commercial (LVL 2 w/ 2 ports)	5	\$ 3,500	\$ 17,500
Multi-Unit Dwelling (LVL 2 w/ 2 ports)	8	\$ 5,250	\$ 42,000
DCFC (Minimum 50 kW capacity)	16	\$ 26,000	\$ 416,000
Fleet/Public Transit DCFC	1	\$ 63,000	\$ 63,000
Fleet/Public Transit Level 2	2	\$ 16,500	\$ 33,000
<b>Customer Outreach</b>	-	-	\$ 250,000
<b>Administration</b>	-	-	\$ 83,000
<b>Budget Flexibility (+15% of Smart Charging Programs)</b>	-	-	\$ 117,645
<b>Total</b>	<b>256</b>	<b>\$ 117,050</b>	<b>\$ 1,234,945</b>

## Key Takeaways:

- EPE serves more densely populated areas than SPS.
- Their residential LVL2 charger rebates are only for smart (Networked) chargers.
- LMI qualified for purchase & installation rebate
- DCFC fleet charging program.
- Fleet level 2 charging rebate.

# Recovery Methods

## **PNM:**

- Costs associated with TEP will be accounted for in a regulatory asset.
- Paid for by all customers excluding lighting.
- A rider (No. 53) will be designed in February 2023 to take effect on customer bills May 2023.
- Rider will net directly against TEP regulatory asset balance.
- Rider will be a \$/kWh charge on a separate line item on customer bills.
- Rider will have an annual “reset” every February to reflect the previous years balance as of December.
- Monthly reconciliation between expenses and revenues.
- PNM is not recovering cost of smart meters in TEP costs.

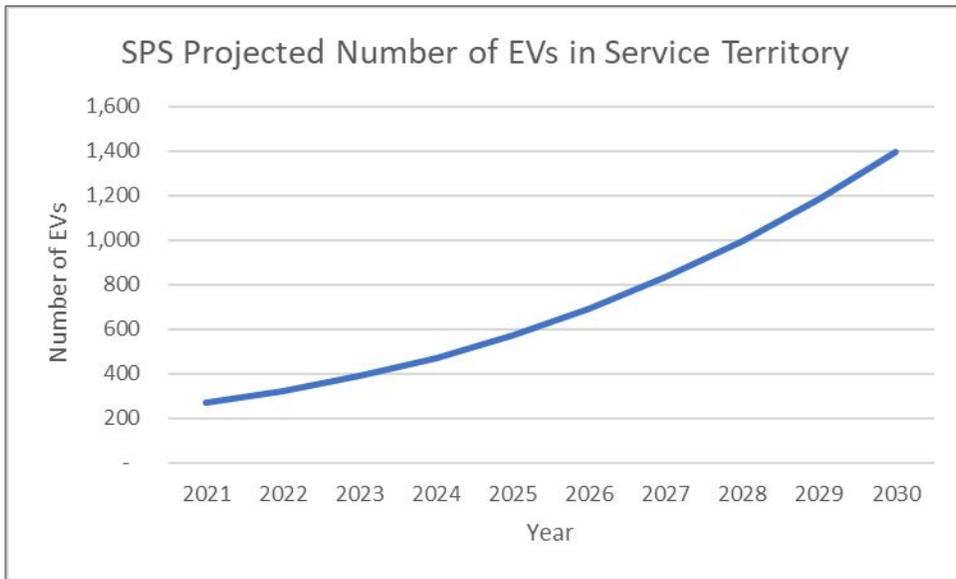
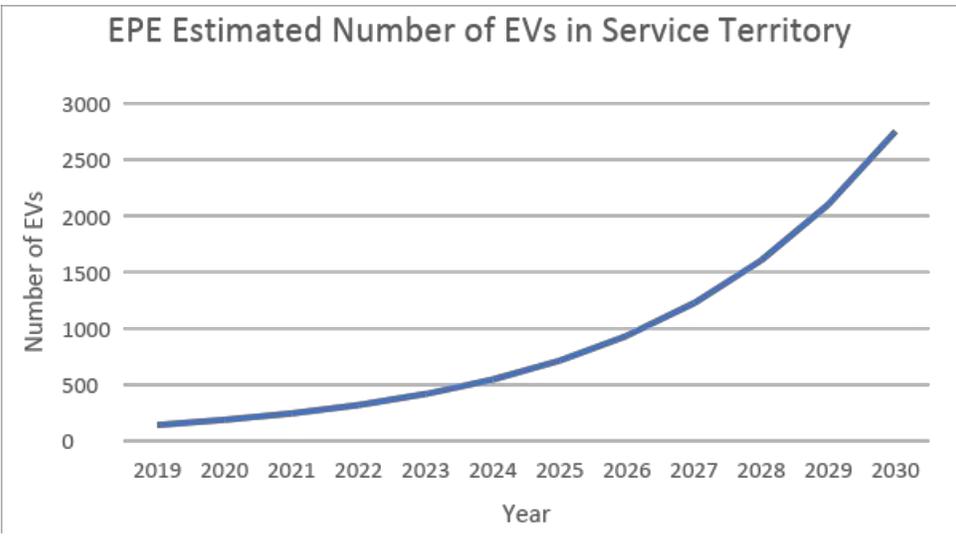
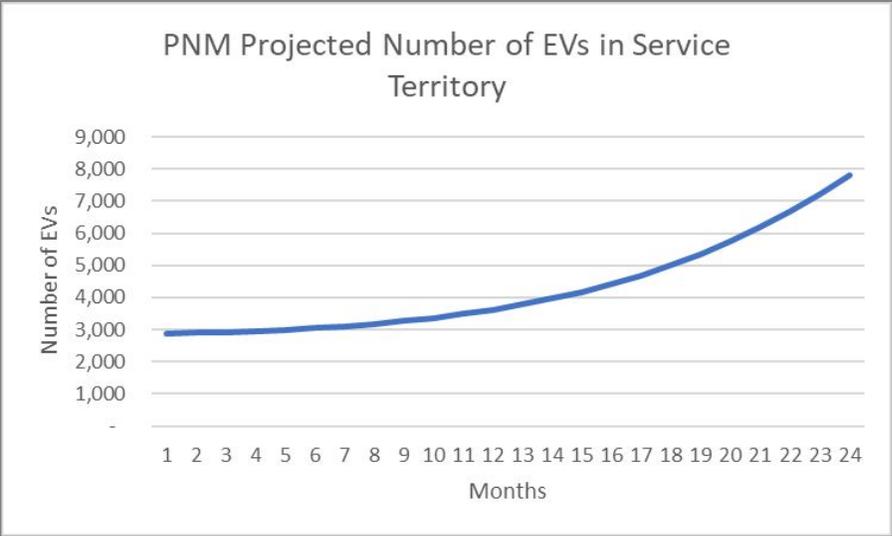
## **SPS:**

- Costs associated with TEP will be accounted for in a regulatory asset.
- Amortized with carrying costs at SPS’s weighted average cost of capital (WACC) over the estimated ten-year useful life of the EV chargers.
- Costs in rider will be offset by revenue from chargers and charging stations.
- Rider will be collected from all customer classes
- October 1<sup>st</sup> of each year SPS will file the projected revenue requirement and rates with the Commission.
- True-up filed August 1<sup>st</sup> of each year.

## **EPE:**

- TEP Cost Rider to provide for recovery of EPE's TEP costs through a \$/kWh charge to all non-lighting service customers.
- At the end of the 2021-2022 TEP program period, EPE will provide a reconciliation of TEP Cost Rider revenues to actual TEP program costs.
- Differences will then be reflected in the TEP Cost Rider of a subsequent TEP.

# Appendix

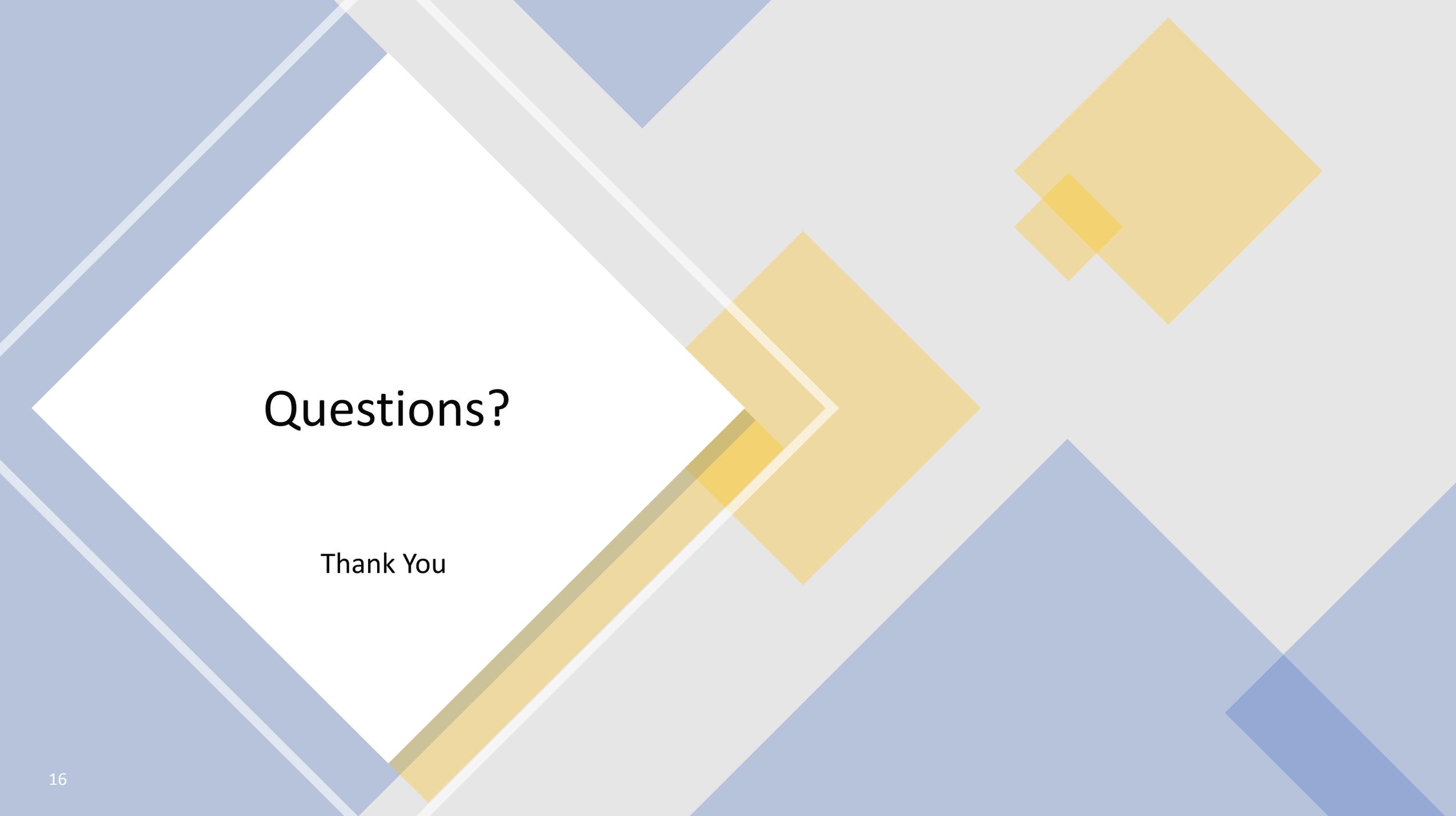


Company Statistics		Budget Roll Up		Budget Sub-Categories		
<b>PNM Overview</b>		<b>PNM Overall Budget (2 Year Plan)</b>		<b>PNM Budget By Category</b>		
(1) Estimated EVs in NM as of 2021 (PNM Estimate)	3,300		<b>Amount (\$)</b>	<b>Percent of Total Budget</b>	<b>Rebates Budgeted</b>	<b>Rebate Amount</b>
(2) Households in NM (2015-2019 Census)	780,249	<b>Residential</b>	\$ 2,250,000	20%		
(3) Residential Total	479,113	<b>Non-Residential</b>	\$ 4,450,000	39%	Level 2 Charger Purchase Cost Rebate	3,900 \$ 500 \$ 1,950,000
(4) Other Customers Total	50,887	<b>Customer Outreach</b>	\$ 1,000,000	9%	LMI Level 2 Installation Rebate	150 \$ 2,000 \$ 300,000
(5) Total (Rowley Testimony Page 13 Line 9)	530,000	<b>Admin &amp; General</b>	\$ 1,463,000	13%	<b>Commercial/Community Installation Rebates</b>	
(6) Approximate Service Area (Miles^2)	5,355	<b>Budget Target (W/O Flexibility)</b>	\$ 9,163,000	80%	DCFC (Behind the Meter, 50kW)	70 \$ 25,000 \$ 1,750,000
(7) Approximate Customer Density (5)/(6)	99	<b>Budget Flexibility Amount (25%)</b>	\$ 2,290,750	20%	Level 2 Ports (Public and Workplace)	360 \$ 2,500 \$ 900,000
(8) Current EVs in Service Area (PNM Estimate)	2,800	<b>Total Budget</b>	\$ 11,453,750	100%	Multi-Family Units (Level 2, Non-LMI)	40 \$ 2,500 \$ 100,000
(9) Projected EVs by June 2023 (PNM S-Curve Estimate)	7,800				LMI Area Multi-Family Units (Level 2)	40 \$ 5,000 \$ 200,000
(10) Approximate Residential Market Share (NM) (3)/(2)	61%	<b>Program Cost Per Customer</b>	\$ 21.61		Mass Transit (Two stops within 1 mile of LMI area)	- - \$ 1,500,000
(11) Percent of NM Customers with EV Served (8)/(5)	0.528%	<b>Residential Cost Per Residential Cust.</b>	\$ 4.70		<b>Customer Outreach</b>	- - \$ 1,000,000
(12) Percent of EV Market Share Served (8)/(1)	85%	<b>Cost Per Year</b>	\$ 5,726,875		<b>Administration</b>	- - \$ 1,463,000
					<b>Budget Flexibility (25%)</b>	- - \$ 2,178,250
					<b>Total</b>	4,560 \$ 37,500 \$ 11,341,250
<b>SPS Overview</b>		<b>SPS Overall Budget (3 Year Plan)</b>		<b>SPS Budget By Category (3 Year Plan)</b>		
(1) Estimated EVs in NM as of 2021 (PNM Estimate)	3,300		<b>Amount (\$)</b>	<b>Percent of Total Budget</b>	<b>Rebates Budgeted</b>	<b>Rebate Amount</b>
(2) Households in NM (2015-2019 Census)	780,249	<b>Residential</b>	\$ 405,000	13%	Wiring Rebate	165 \$ 500 \$ 85,000
(3) Residential Total	90,651	<b>Non-Residential</b>	\$ 2,264,000	71%	LMI Wiring Rebate	20 \$ 1,300 \$ 27,000
(4) Other Customers Total	26,349	<b>Customer Outreach</b>	\$ 350,000	11%	Home Charging Service	105 - \$ 82,000
(5) Total Customers NM (Application Page 13 Line 7)	117,000	<b>Admin &amp; General</b>	\$ 150,000	5%	EV Optimization (Load Management, \$50 Credit)	185 - \$ 15,000
(6) Approximate Service Area (Miles^2)	10,353	<b>Budget Target (W/O Flexibility)</b>	\$ 3,169,000	80%	<b>Commercial</b>	
(7) Approximate Customer Density (4)/(5)	11	<b>Budget Flexibility Amount</b>	\$ 792,250	20%	DCFC (Behind the meter)	9 \$ 53,000 \$ 477,000
(8) Current EVs in Service Area (Application, Pg 9 Line 13)	143	<b>Total Budget</b>	\$ 3,961,250	100%	DCFC (Fully Owned by SPS)	8 - \$ 1,328,000
(9) Projected EVs by 2023 (Application, Pg 9 Line 13)	390				<b>Customer Outreach</b>	- - \$ 350,000
(10) Approximate Residential Market Share (NM) (3)/(2)	12%	<b>Program Cost Per Customer</b>	\$ 33.86		<b>Evaluation</b>	- - \$ 150,000
(11) Percent of NM Customers with EV Served (8)/(5)	0.122%	<b>Residential Cost Per Residential Cust.</b>	\$ 4.47		<b>Admin/O&amp;M</b>	- - \$ 655,000
(12) Percent of EV Market Share Served (8)/(1)	4%	<b>Cost Per Year</b>	\$ 1,320,417		<b>Budget Flexibility (25%, &amp; Intra-Portfolio Flexibility)</b>	- - \$ 792,250
					<b>Total</b>	492 \$ 54,800 \$ 3,961,250
<b>EPE Overview</b>		<b>EPE Overall Budget (2 Year Plan)</b>		<b>EPE Budget By Category (2 Year Plan)</b>		
(1) Estimated EVs in NM as of 2021 (PNM Estimate)	3,300		<b>Amount (\$)</b>	<b>Percent of Total Budget</b>	<b>Rebates Budgeted</b>	<b>Rebate Amount</b>
(2) Households in NM (2015-2019 Census)	780,249	<b>Residential</b>	\$ 254,800	21%	Purchase Rebate (LVL2, Networked Charger)	168 \$ 500 \$ 84,000
(3) Residential Customers Total	85,891	<b>Non-Residential</b>	\$ 529,500	43%	LMI Installation (LVL2, Networked Charger)	56 \$ 2,300 \$ 128,800
(4) Other Customers Total	11,657	<b>Customer Outreach</b>	\$ 250,000	20%	<b>Commercial/Community Installation Rebates</b>	
(5) Total Customers NM (Application Page 13 Line 7)	97,548	<b>Admin &amp; General</b>	\$ 83,000	7%	Commercial (LVL2 w/2 ports)	5 \$ 3,500 \$ 17,500
(6) Approximate Service Area (Miles^2)	3,716	<b>Budget Target (W/O Flexibility)</b>	\$ 1,117,300	90%	Multi-Unit Dwelling (LVL2 w/2 ports)	8 \$ 5,250 \$ 42,000
(7) Approximate Customer Density (4)/(5)	26	<b>Budget Flexibility (+15% to Rebate)</b>	\$ 117,645	10%	DCFC (Minimum 50 kW capacity)	16 \$ 25,000 \$ 416,000
(8) Current EVs in Service Area (EPE Estimate)	242	<b>Total Budget</b>	\$ 1,234,945	100%	Fleet/Public Transit DCFC	1 \$ 63,000 \$ 63,000
(9) Projected EVs by 2024 (EPE Estimate)	545				Fleet/Public Transit Level 2	2 \$ 16,500 \$ 33,000
(10) Approximate Residential Market Share (NM) (3)/(2)	11%	<b>Program Cost Per Customer</b>	\$ 12.66		<b>Customer Outreach</b>	- - \$ 250,000
(11) Percent of NM Customers with EV Served (8)/(5)	0.248%	<b>Residential Cost Per Residential Cust.</b>	\$ 2.97		<b>Administration</b>	- - \$ 83,000
(12) Percent of NM EV Market Share Served (8)/(1)	7%	<b>Cost Per Year</b>	\$ 617,472.50		<b>Budget Flexibility (+15% of Smart Charging Programs)</b>	- - \$ 117,645
					<b>Total</b>	256 \$ 117,050 \$ 1,234,945

# Low-To-Moderate Income Threshold

- As of 11/02/2021
- Likely subject to change with increasing consumer price index/Inflation.

LMI Individua; Criteria (200% of Federal Poverty Level)	
Persons in family/household	Income
1	\$ 25,760
2	\$ 34,840
3	\$ 43,920
4	\$ 53,000
5	\$ 62,080
6	\$ 71,160
7	\$ 80,240
8	\$ 89,320

The background features a complex geometric design. It includes several overlapping shapes: a large white diamond on the left, a large yellow arrow pointing right in the center, and various blue and grey triangles and polygons scattered throughout. The colors are muted and professional.

Questions?

Thank You

# References:

1. <https://www.pewresearch.org/fact-tank/2021/06/03/electric-vehicles-get-mixed-reception-from-american-consumers/>
2. [https://www.pewresearch.org/fact-tank/2021/06/07/todays-electric-vehicle-market-slow-growth-in-u-s-faster-in-china-europe/ft\\_21-05-21\\_electricvehicles\\_4/](https://www.pewresearch.org/fact-tank/2021/06/07/todays-electric-vehicle-market-slow-growth-in-u-s-faster-in-china-europe/ft_21-05-21_electricvehicles_4/)
3. <http://www.rapidshift.net/transition-to-evs-set-to-climb-the-s-curve-in-the-next-decade/>