BETTER TOGETHER

https://bit.ly/solarESBs

IEC Illinois Energy Consortium

Powered by Future Green

Electric School Buses
Solar Energy
Future Green

https://bit.ly/solarESBs

Econergy partnered with IASA, IASB, and IASBO to create Future Green Energy Consortium.

Econergy is a national sustainability and renewable energy development company.

Future Green Energy Consortium is a (non-profit) advocate for school districts

IEC Powered by Future Green Services

For over 20 Years we have saved IL school districts tens of millions of dollars on energy solutions!

Brokerage

- Access to 120+ suppliers for electricity and natural gas
- Remove limitations on energy efficiency and on-site solar
- Flexibility on product structure and term

Solar Development

- Increase savings beyond simple commodity brokerage
- Stable, long-term budgeting
- Meet environmental and renewable energy targets
- No investment or additional obligations required from the member

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Services Rendered:

- Energy Brokerage
- Onsite Solar Development
- Electrification of Bus Fleets
- Energy Storage Systems
- Financing to cover match requirements
- State advocacy for favorable energy policy towards schools
- Local employment opportunities to install renewable energy assets
- Educational programming guidance of renewable energy technology

Key Partnerships

BETTER SERVICES!

MORE SAVINGS!

Highland

MTE

MIDWEST TRANSIT EQUIPMENT

Transformed Buses Cost the same as Diesel

Midwest Transit Equipment partnership

Fully refurbished IC-Bus with a Sea Electric Drivetrain

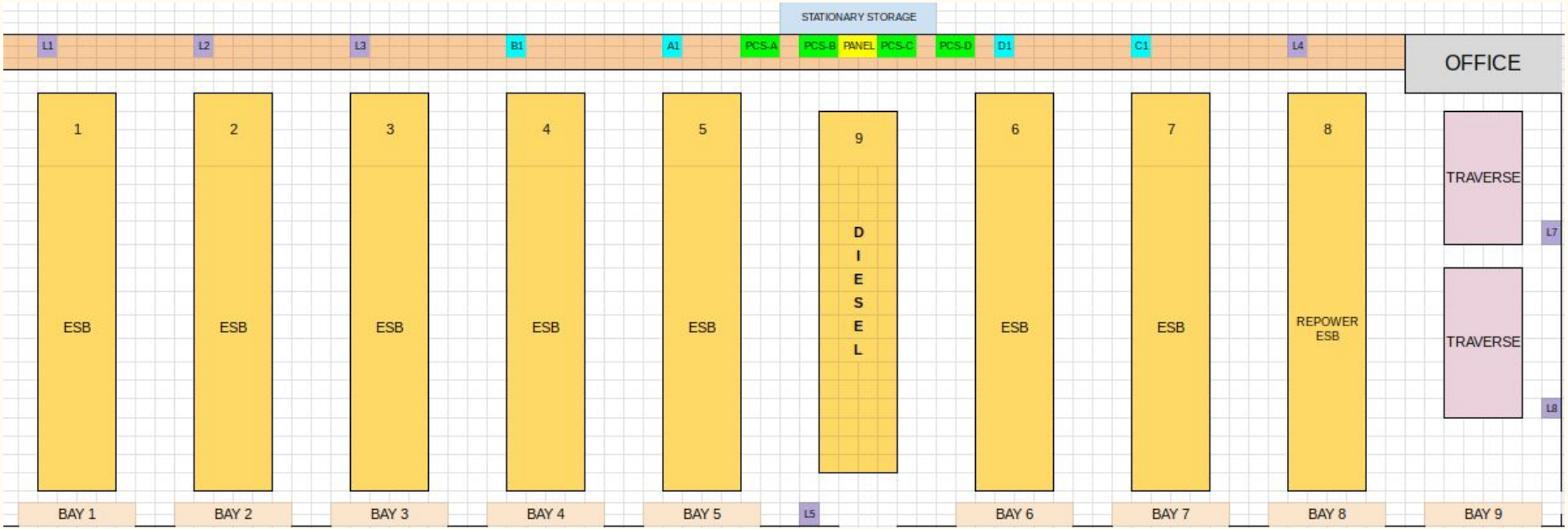
Great way to get started!

Include these in your initial package!

TCO Calculator

SOLAR ARRAY | 204Kw

Electric Bus Barn with Charging Stations



SUMMER PEAKER REDUCTION (60 calls) 80% Discharge Model				
startTime	endTime	kWh	action	
12:00 AM	7:00 AM	180.8	CHARGE TO FULL	
7:00 AM	11:00 AM	180.8	DISCHARGE to 20%	
11:00 AM	2:00 PM	180.8	CHARGE TO FULL	
2:00 PM	7:00 PM	180.8	DISCHARGE to 20%	
7:00 PM	12:00 AM	0.0	IDLE	
60	180.8	kWh DISCHARGED FOR PROGRAM		10,848
360	52	kWh USED for ROUTES		18,720
		TOTAL kWh DISCHARGED (YEAR)		29,568
		ANNUAL MILEAGE EQUIVALENT		22,745
		8-YEAR DISCHARGE		236,544

SCHOOL DAYS (180) 40 MILES AT 1.3KwH/mile			
startTime	endTime	kWh	action
12:00 AM	6:30 AM	52.0	CHARGE TO FULL
6:30 AM	8:30 AM	52.0	kWh USED
8:30 AM	11:00 AM	0.0	IDLE
11:00 PM	2:30 PM	52.0	CHARGE TO FULL
2:30 PM	4:30 PM	52.0	kWh USED
4:30 PM	7:00 PM	0.0	IDLE
7:00 PM	11:00 PM	0.0	IDLE
11:00 PM	12:00 AM	0.0	IDLE
$14,102.40	PROGRAM COMPENSATION PER ESB		

BETTER TOGETHER

Diesel & Natural Gas Prices - Historical Graph

I want energy costs that feel more like this!

DIESEL BUSES ARE ENERGY CONSUMERS

ELECTRIC BUSES ARE ENERGY ASSETS

Energy Cost Comparison (see full sheet here)

Year	Savings	Assets & Partners
FY21	19%	Solar & Nextera
FY22	35%	Solar & IEC-FG
FY23	36%	Solar & IEC-FG
FY24	*61%	Solar, IEC-FG, & ESBs (5)
FY25	*56%	Solar, IEC-FG, & ESBs (5)
FY26	*53%	Solar, IEC-FG, & ESBs (5)

* Does not include peak shaving & potential V2G credits

WILLIAMSFIELD SCHOOLS

My advice...lock into a long-term rate with a PACKAGE. Expand your energy assets as pricing &/or incentives allow.

FIRST STEP:

IEC Powered by Future Green Energy Analysis

- Electrical Infrastructure
- Electric Bill (usage & current costs)

Highland Electric School Bus Fleet Analysis

- Bus Route Mileage
- Diesel Fuel (usage & historical costs)

* THESE PARTNERS WILL MONITOR FOR INCENTIVES *

Current/Upcoming Incentives

- Illinois Renewable Energy Credits (right now)
- DOE Renew America's Schools (right now)
- DOE Smart Grid Grants (right now)
- EPA Clean School Bus Grants (Feb/March)
- EPA Clean School Bus Rebates Round #2 (summer/fall)
- Additional IL-VW Funding
- ComED & AmerenIL Beneficial Electrification Plans


WORLD RESOURCES INSTITUTE
40 YEARS
RESEARCH DATA INITIATIVES INSIGHTS
https://electricschoolbusinitiative.org
Electric School Bus Initiative
Electric School Bus Implementation: Resources & Tools

QUESTIONS?

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ADDITIONAL SLIDES AS NEEDED


LION

EPA Clean School Bus Rebates

15 IL school districts won EPA rebates

123 Electric School Buses coming to IL

$48.3mm in energy assets coming to schools!

69 school districts are on the waitlist

Future Green
ENERGY CONSORTIUM

Argenta-Oreana Elementary School

400 W South Street Oreana, IL 62554

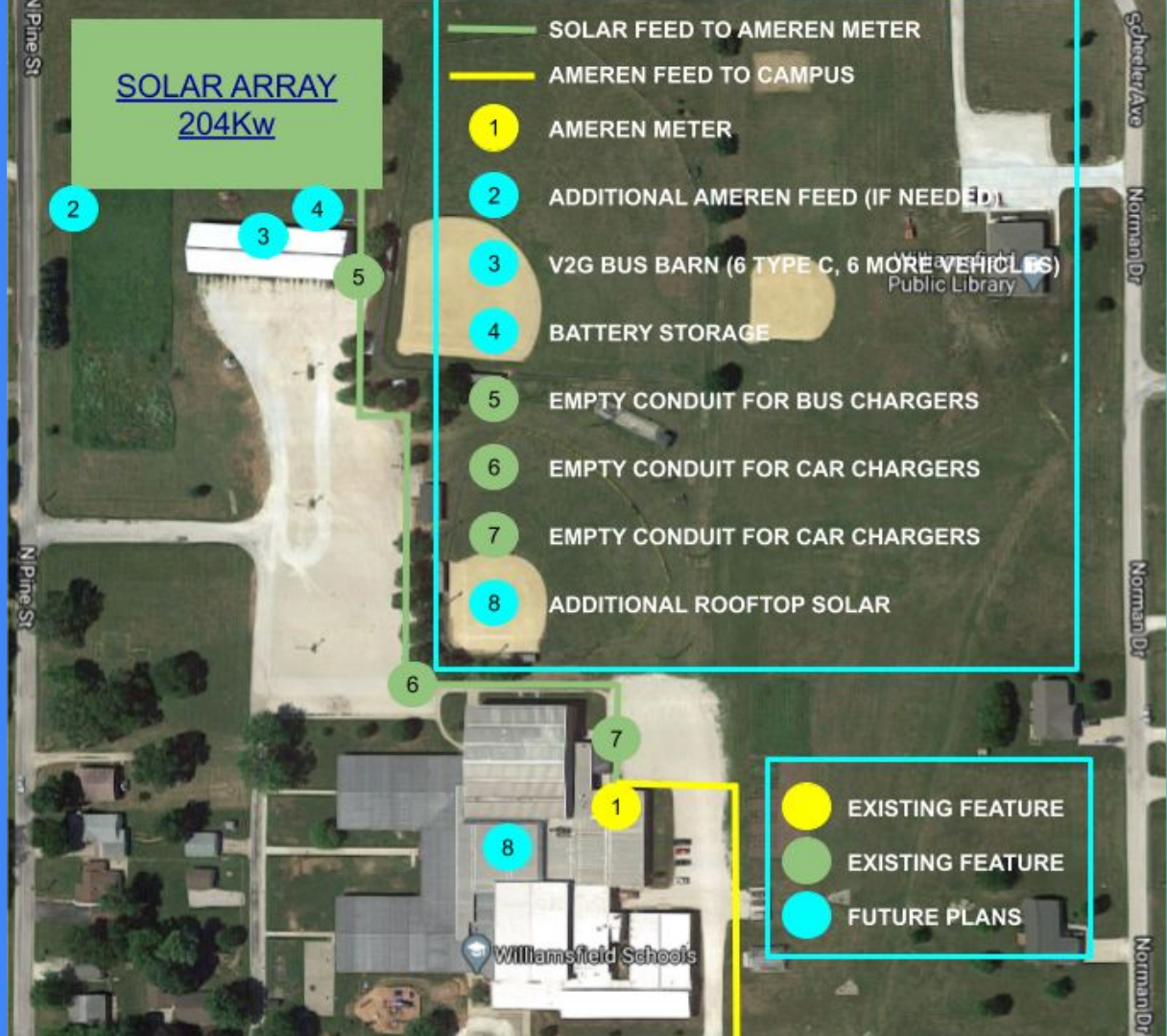
System Information
PPA Term: 25 years
Est. PPA Price: .055 KWH
Est. Escalator: 1.5% annual

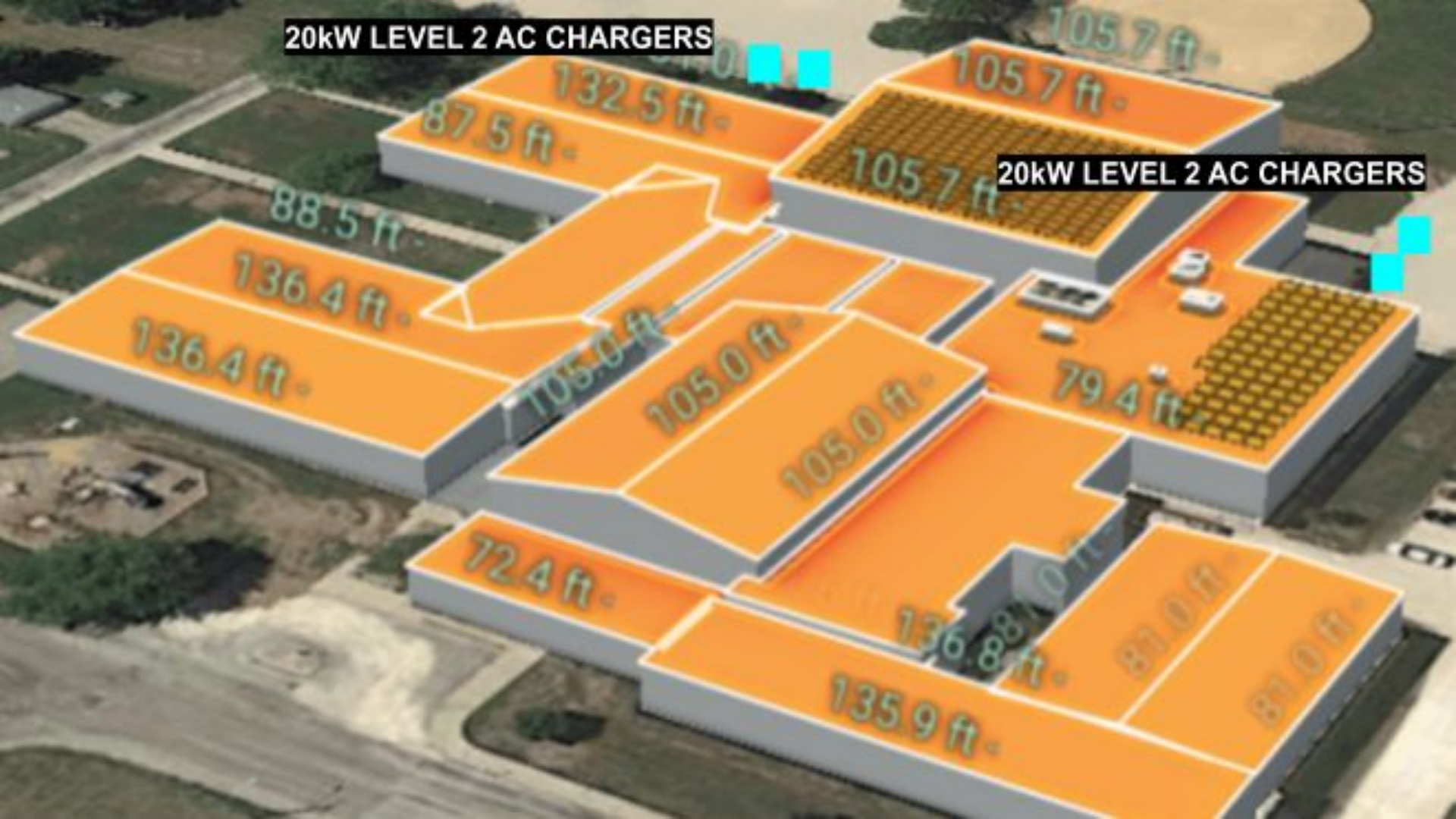
O&M: Included
Insurance: Included
Management: Included
Lease Rate: $1/year

Upgrades: Not Included
Est. System Size: 322.3 KW
Est. Year 1 Production: 485,022 KWH
Est. 1st Year Savings: $12,650.00

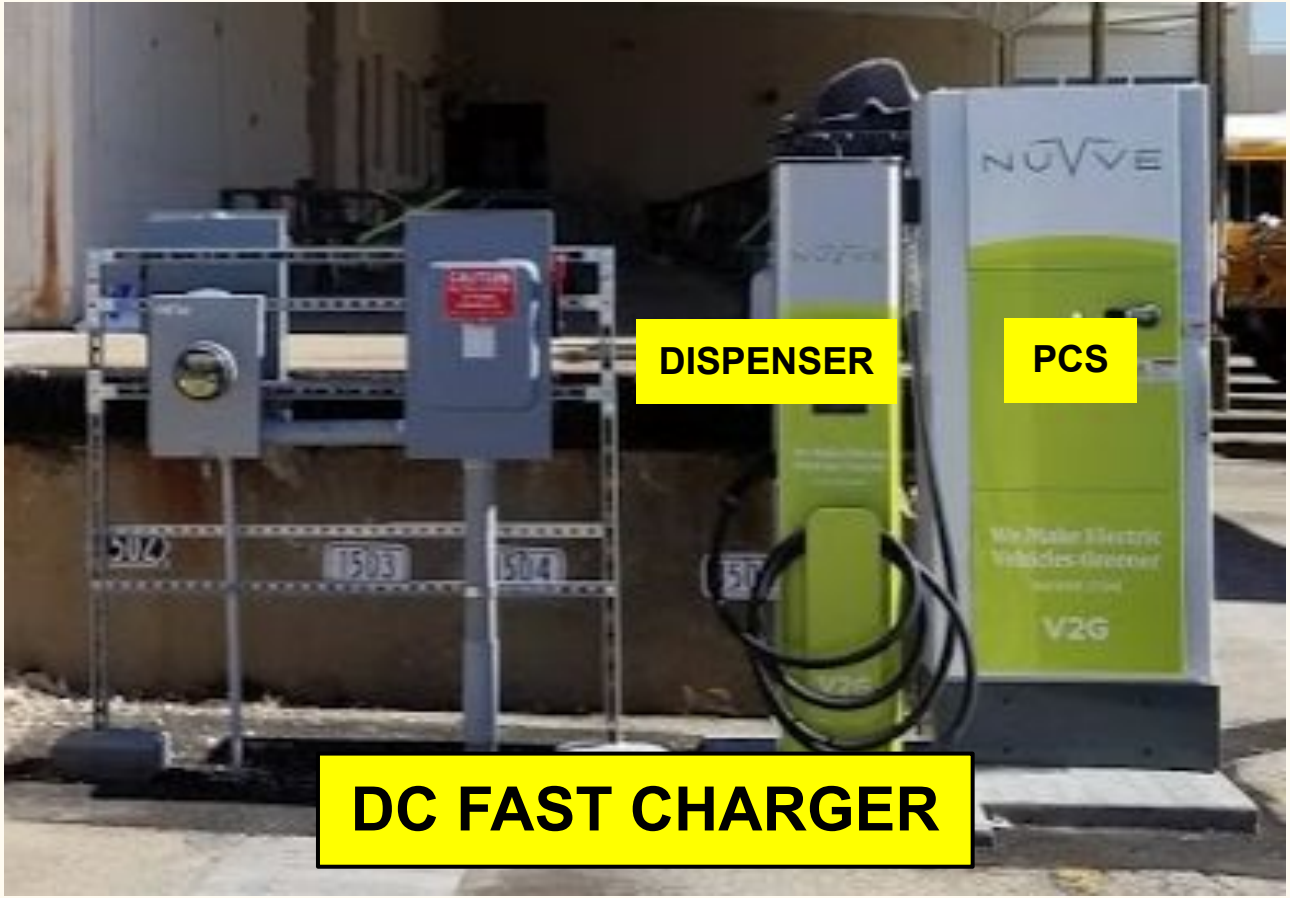
Next Step: Power Purchase Agreement

Williamsfield Schools Mini-Microgrid Project




20kW LEVEL 2 AC CHARGERS
20kW LEVEL 2 AC CHARGERS
105.7 ft
132.5 ft
87.5 ft
105.7 ft
105.7 ft
88.5 ft
136.4 ft
136.4 ft
105.0 ft
105.0 ft
105.0 ft
79.4 ft
72.4 ft
136.8 ft
80.0 ft
80.0 ft
135.9 ft


LEVEL 2


DISPENSER
PCS
DC FAST CHARGER

CHARGING LEVELS

	Level 1 (L1)	Level 2 (L2) Single Port[a]	Direct Current Fast Charger (DCFC) Single Port
Type of current	Typically for residential, personal vehicle charging; not suitable for ESBs due to low rate of charge relative to the time it takes to charge a battery	Alternating Current	Direct Current
Voltage (V)		208/240	200–600
Power level (kW)		~7–20	~24–150
ESB recharge time		**5.5 - 13.0 hrs**	**1.0 - 4.5 hrs**
Charger equipment cost[c]		$400–$6,500[d]	$10,000–$40,000[d]
Installation cost[e]		$600–$12,700[d]	$4,000–$51,000[d]

Notes: Abbreviations: V = volt; kW = kilowatt; ESB = electric school bus; [a] Potential for dual port offering; [b] See Tables 2, 3, and 4; [c] Costs are largely dependent on the power output (kilowatts) of the charger, the degree of control over charging, and other advanced features; [d] Smith and Castellano 2015; ITSJPO 2019; [e] Installation costs will be site and geography dependent. Estimates do not include potential grid upgrade costs.