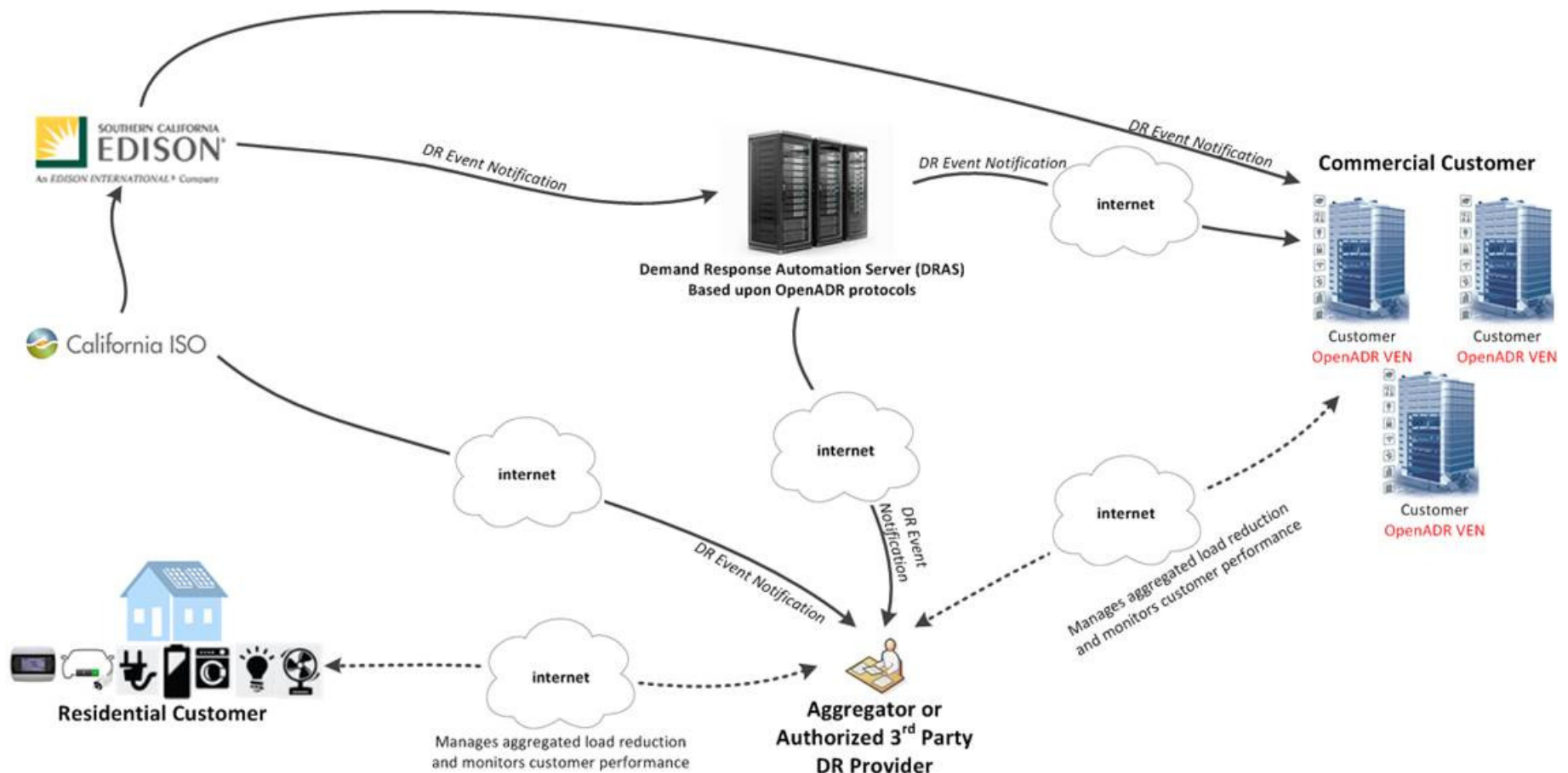


SCE's OpenADR Overview

OpenADR DER Communications Workshop
Hosted by EPRI

April 18, 2017

How AutoDR Works @ SCE



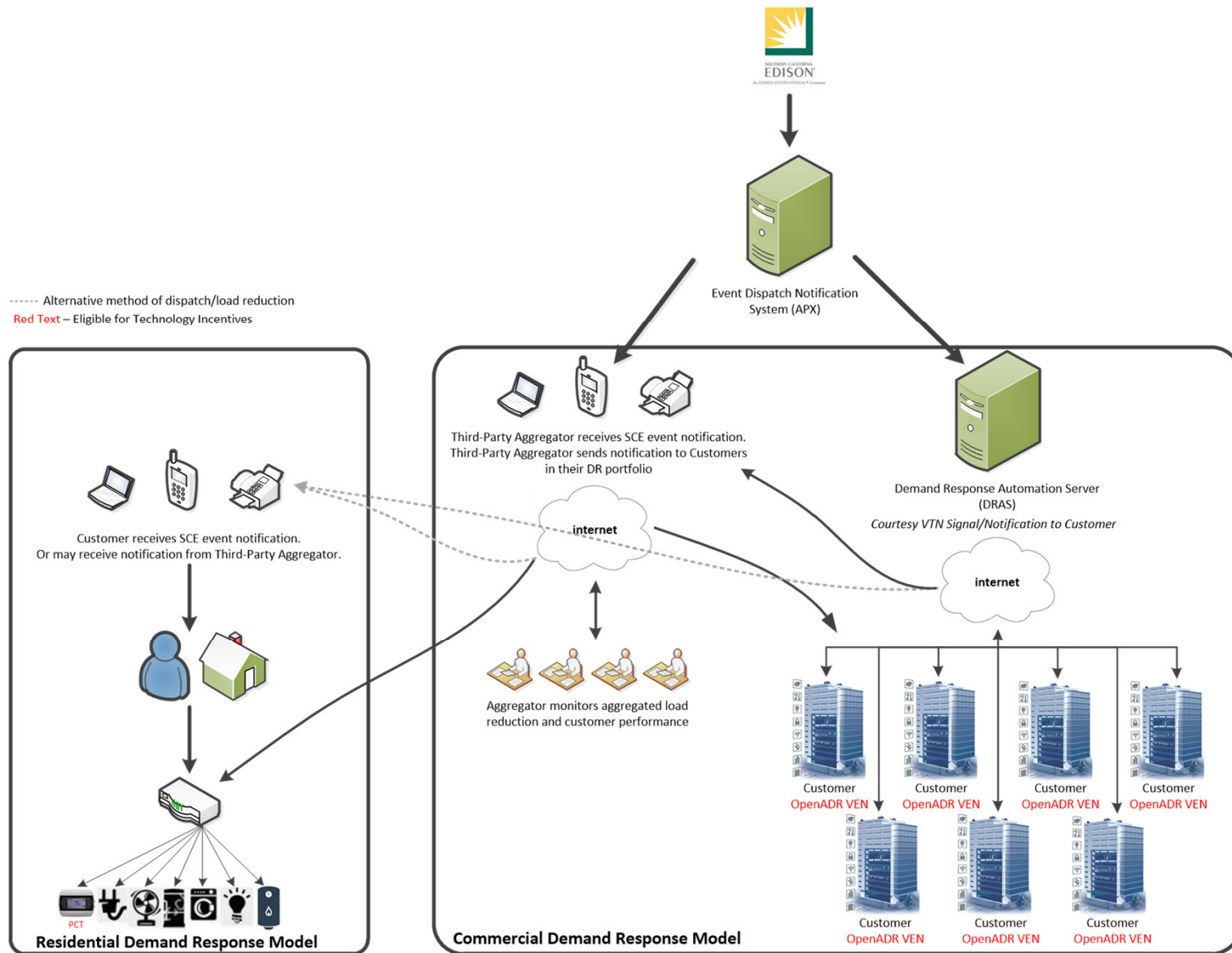
SCE's CAISO Market Integration

	Integration Status*	MWs	Customer Class	Capacity Incentive?	Energy Incentive?	SLAP (local) Dispatch?
Base Interruptible	DO RDRR	666	Non-Res	Yes	No	Yes
Ag Pumping Interruptible	DO RDRR	50	Non-Res	Yes	No	Yes
Summer Discount Plan	DO RDRR with DA energy	293	Res & Non-Res	Yes	No	Yes
Capacity Bidding	PDR	20	Non-Res	Yes	Yes	Yes
Aggregator Managed	PDR	112	Non-Res	Yes	Yes	Yes
Critical Peak Pricing	Not Integrated	39	Res & Non-Res	Yes	No	No
Save Power Day	Not Integrated	3	Res	No	Yes	No
Demand Bidding	Not Integrated	114	Non-Res	No	Yes	No
DR Auction Mechanism Pilot	PDR (via non-SCE DR Provider)	10	Res & Non-Res	Yes	Yes	Yes

***PDR** (Proxy Demand Response): CAISO product for economic DR. Can be either Day Ahead or Day Of.

***RDRR** (Reliability Demand Response Resource): CAISO product for reliability DR. RDRR must always have a Day Of component that is dispatched in the real-time market in response to reliability conditions. RDRR can also have a Day Ahead component that is dispatched on an economic basis.

Current ADR Program Structure



SCE's ADR Incentive Structure

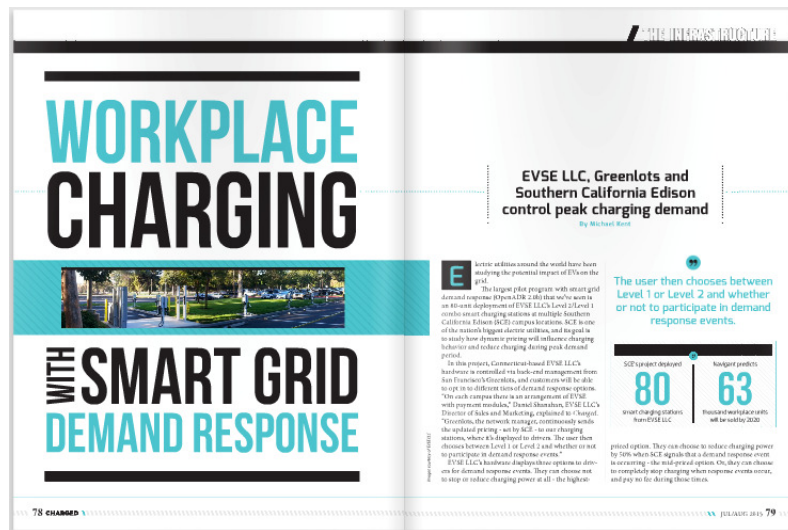
LC	SOUTHERN CALIFORNIA EDISON (SCE)						
	2017			2018-2022 (proposed)			
	LC&I	SMB	Res***	LC&I	SMB		Res
Customer Size	>200kW (min 30kW reduction)	100<499kW (min 30kW reduction)	Residential	>200kW (min 30kW reduction)	100<499kW (min 30kW reduction)	<200kW (no min load reduction)	Residential
Incentive Level	Max of \$200/kW	Max of \$300/kW	\$75 PCT Rebate <i>(bill credit)</i>	Max of \$200/kW	Max of \$300/kW	\$75 PCT Rebate <i>(bill credit)</i>	\$75 PCT Rebate <i>(bill credit)</i>
Incentive Structure	60/40**	100% up front		60/40**	100% up front		
Incentive Project Cap of Eligible Costs	75%	100%	N/A	75%	100%	N/A	
Incentive Calculation Methodology	Calculated	Deemed		Calculated	Deemed		
Eligible DR Programs	CBP, AMP, DBP, RTP, CPP, DRAM		PTR	CBP, RTP, CPP, DRAM			PTR, CPP, DRAM

SCE Technology Incentive Program (TIP)

2018 Technology Incentive Program		
PLS (no changes from 2017)	AutoDR (no changes from 2017)	PCT (no incentive changes; move budget from PTR program; new offering for SMB to support default CPP)

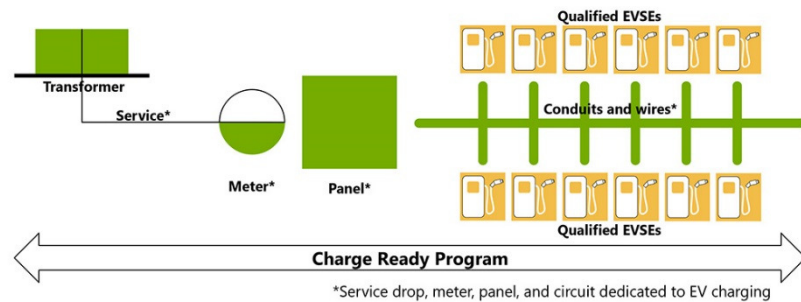
- Creates an umbrella program (TIP) which encompasses current technology incentive programs; PLS, AutoDR and PTR-ET-DLC programmable communicating thermostat (PCT) incentives.
- No proposed changes to Permanent Load Shifting (PLS) and AutoDR Technology Incentive Programs.
- Propose a new AutoDR \$75 PCT incentive/offering to SMB for default CPP initiative and AB 793.
- AutoDR budget includes funding for upgrade of existing ADR 1.0 devices to 2.0b devices.
- Includes load management for Electric Vehicle Charging (2.0b)

L2 EVSEs will be OpenADR 2.0b



Charge Ready Deployment Overview

Charge Ready aims at reducing the cost and complexity of deploying charging stations for our customers



Infrastructure deployed by SCE (all costs covered by the Program)

Owned and operated by participating customers (rebate against hardware and installation costs)



Future State of Demand Response

What areas of focus are most important in ensuring DR provides value in 2018 and beyond? What are SCE's needs for the DER future?

Inclusion of Fast and Flexible action in the DR Portfolio

- Fast response, providing **flexible dispatch that can ramp up or down** to accommodate changes in pricing needs due to increased renewable generation (avoid curtailment)

Reliable, Predictable Resource

- Programs that can provide **consistent** results in accordance with wholesale rules and be incorporated as a resource in the system planning processes

Locational and Granular Deployment & Dispatch

- Ability to dispatch at a partial MW or territory level (S-LAP or more granular) to meet CAISO as well as distribution system needs and minimize customer impact

Customer Choices

- Providing **customers with tools and choices (rates and IDSM programs)** to manage their energy bill

As a guiding principle, all of these areas of focus will be supported by SCE's investment and commitment to OpenADR 2.0b

