

## Amsterdam

## Smart Charging in Ams

terda

EVEnergy March 29th 2017, Art van der Giessen

## 2016: Clean air for Amsterdam



🗙 Gemeente

Amsterdam

## **Present: home charging = public charging**

××××



## X Demand driven roll-out supported by charging data



11 12 13 14 15 16 17 18 19 20 21 22 23

5 6 7 8

10

9

- 2.200 public chargers
- 25+ fast chargers
- 2500+ private chargers

	EVB				
Chargepoint ID:	P1514049				
Adress:	Herengracht 129, Amsterdam				
Walking Distance in m	180				
	november	oktober	september	august	juli
Sessions	85	72	88	45	64
Totaluse	483	507	508	257	368
Unique RFID	45	40	45	23	38
Average (KWh) per session	6	7	6	6	6
Connectiontime	980	1289	999	679	483
Occupancy rate	68%	87%	69%	46%	32%











## Solar Energy Program Amsterdam



ACTIEF EN GERICHT INANCIEREN ZONPROJECTEN NINGE REGELS & LOBEY ZON & GEBIEDSONTWIKKELING ZON OF GEMEENTEDAKEN Zon en energie neutraal be markt uitdagen tot meer zonne-energie
 Grondgehonden zon Zon website: de basisinformatie op Financieren van zon-eaco's entelijke regels continu ond Project inservative son op recommenten of berchamd stadsgesicht Seaart grid: project op snijvlak elektrische mobiliteit, opslag en s ords - Uw-date-is-geachlist-activ Financieren van andere zonprojecte lelangenbehartigen Orderstearing sancolpera rationale regels beïnvloeden Experimenteerregeling Rijk en zo and the second Gemeente Schaalsprong Zon Amsterdam Uitvoeringsprogramma 2016-2018



### Solar panels (systems) in Amsterdam



### Challenge: building a future proof EV-Energy system Interreg FUROPEAN LINION North Sea Region (number of) SEEV4-City vehicles distribution stations battery capacity / charging speed **European Regional Development Fund** available (sustainable) energy time location/ charging station/ type O X Ο €⁄ time V2G ~ flexible Ο Ο ÷ social **15 21** storage 1.51 spreading grid capacity demand supply

# Project: Smart charging & optimizing the grid \$\overline\$ 100 charging stations:





North Sea Region SEEV4-City Stuttgart, Germany, October 9 - 11, 2017

### Building a Smart Charging Ecosystem in Amsterdam

### Getting ready for mass market of (next generation) EVs

Frank Geerts (Liander, Utrechtseveg 68, 6812 All Arnhem, frank.geerts@alliander.com), Bart Vertelman (City of Amsterdam), Marjolein Kelder (Nuon part of Vattenfall), Friso Schuring (Liander)

### Abstract

The E-visonary award handed out to the City of Amsterdam during the World Electric Vehicle Symposium in Mottreal in 2016, confirmed once more no city in the world is as far ahead in the transition to electric transport as Amsterdam. New innovative projects are being started and executed in 2017 and the city of Amsterdam, together with partners Liander, Nuon and ElaadNL, propose to the organization of EVS30 the first release of the outcome and results of the project "Building a Smart Changing Ecosystem in Amsterdam".

In order to be prepared for the mass market of next generation EVs, Amsterdam is currently executing the

"Learn from applying a local capacity profile "





# Future: EV as part of energy transition ×××



