## **Today's Webinar Will Begin Shortly:** How to Get and Keep Your Piece of the Energy Pie

QUESTIONS? Use the questions box on your screen AUDIO ISSUES? Use the global dial-in number in your confirmation email



# How to Get and Keep Your Piece of the Energy Pie

Dilemmas and opportunities sparked by electric mobility

## Agenda

- 1 **Electrification of everything** opportunity or threat?
- Tackling mobility methods and considerations to power EVs
   Getting a piece of the pie approaches to capture and retain market share

## The main energy trends have a common thread ...

**Distributed power** 

#### **Building electrification**

**Electric mobility** 

A DE LA DE L

**D**e

0





#### **Renewable electricity generation by source**



• **}** Lux



#### Natural gas final consumption by sector





#### **Electricity final consumption by sector**









lient confidential. Not for redistribution



**Electricity final consumption by sector** 



Client confidential. Not for redistribut

9

### In pie terms ...

Utilities no longer own a third of this piece

A big piece of the pie is getting bigger

There's a new piece!

**D**e

0



10

Electric mobility is a unique piece of the pie

11

# **Electric utilities are well positioned to take on this new piece of the pie**



There's a new piece!



## Agenda

- 1 Electrification of everything opportunity or threat?
- Tackling mobility methods and considerations to power EVs
   Getting a piece of the pie approaches to capture and retain market share

## **Conventional charging is uninteresting**





• **}** Lux

14 Client confidential. Not for redistribution

## **Conventional charging is uninteresting**



15 Client confidential. Not for redistribution

## **Conventional charging is uninteresting dangerous**



**16** Client confidential. Not for redistribution

## Smart charging is a necessity





behind-the-meter smart EV charging

solution

• **LUX** Research

>Lux

**17** Client confidential. Not for redistribution

## **Vehicle-to-Grid is the future**



### **Parker Project - Denmark**



## HIGHLIGHT **€1,860** Revenue from grid services per vehicle per year



# It's not only about managing power delivery, but also about...



NOTE: Charge times consider a 2020 Nissan Leaf Plus, power ratings from SAL J1772

Research

### Agenda

- 1 Electrification of everything opportunity or threat?
- 2 Tackling mobility methods and considerations to power EVs
- 3 Getting a piece of the pie approaches to capture and retain market share

The electric mobility piece attracts more players with new business models



## **Electric utilities will face competition from O&G companies looking to expand into the power sector and utility business**

Venture investment deals from O&G majors between 2015 and Q3 2020



# What are some strategies today?

## ELECTRICITY RETAIL CASE STUDY Octopus Energy

### V2G for home and grid energy management

#### **POWERLOOP PROJECT SUMMARY:**

Homeowners participate by paying a monthly fee of £299 for a bundle of services that includes a leased Nissan Leaf, a bidirectional charger, a smart meter, and 100% renewable electricity for the home.



**PROJECT PARTNERS:** 

## wallbox NISSAN





## HIGHLIGHT £30/month

Cashback credit if 12 full cycles are completed in a month. To complete a cycle driver should plug the EV before 6pm until at least 5am the next day.



## AUTOMAKER CASE STUDY Mitsubishi

Electric mobility combined with extended home capabilities

#### SUMMARY:

The Dendo Drive House system includes a bidirectional EV charger coupled with a solar PV and battery systems, and Mitsubishi planned to offer this package to homes in Japan and Europe starting in 2019.



"Japanese consortium beats Shell on home ground in Eneco acquisition" SMART ENEL

## HIGHLIGHT €10,000

estimated cost of bidirectional charger alone; solution pricing will likely be a major barrier for adoption



# O&G CASE STUDY Shell Recharge

#### Integrates stationary storage with fast EV charging

#### **PROJECT SUMMARY:**

Alfen will integrate a 350 kWh stationary battery supporting ultrafast 175 kW EV chargers at Shell's service station in the Netherlands. Shell aims to use the battery system to avoid grid connection upgrades, support ultrafast charging events, increase the use of renewable electricity for EV charging, and provide grid services by integrating the system into a virtual power plant.



#### **PROJECT PARTNERS:**





greenlots

## HIGHLIGHT 160 fast chargers

Shell plans to have a network of 200 charging points powered by 100% certified renewable electricity in the Netherlands "in the next few years."



## What about the future?

## 0&G CASE STUDY Sinopec

### Exploring battery swapping in China

#### **PROJECT SUMMARY:**

The Chinese automaker launched the second generation of its swapping station in China and signed a partnership with Sinopec, who plans to build a network of 5,000 stations charging and swapping stations in the next few years.



#### **PROJECT PARTNERS:**





## HIGHLIGHT 312 swaps/day

Last year, Nio reached the milestone of 500,000 swaps in two years and currently has a network of around 190 swapping stations.



## **Key Takeaways**

Leverage

Utilities should leverage their energy management expertise and current relationship with consumers

Beware

O&G companies will become strong direct competitors for electric utilities

Partner

Automakers actively seek to make their EVs part of the energy system, making them attractive strategic partners for utilities



## Thank you

A link to the webinar recording will be emailed within 24-48 hours

#### **UPCOMING WEBINARS**

- July 27th: <u>Technology Trends Decarbonizing the</u> <u>Chemicals Industry</u>
- August 24th: <u>Top Technology Innovations</u> Driving Growth in the Food and Beverage Industry
- September 21st: The Hospital of the Future

#### **KEEP IN TOUCH**

Email:	questions@luxresearchinc.com
Visit:	www.luxresearchinc.com
Read:	http://www.luxresearchinc.com/blog/
Y	@LuxResearch
in	Lux Research

