The future is electric!

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The EV revolution in Norway
- explanations and lessons learned

- Status
- Analysis
- Lessons learned

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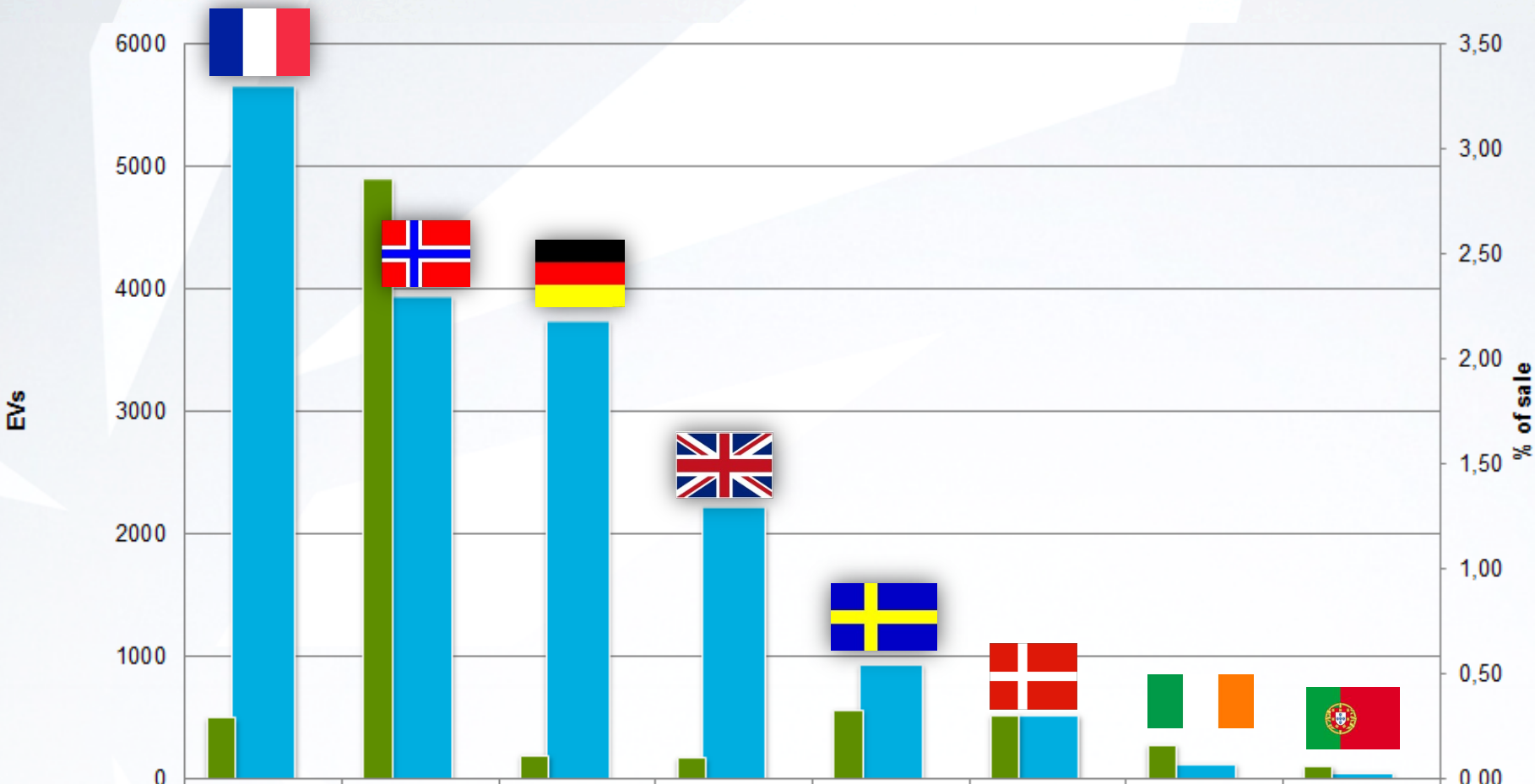
In 2012 a total of 4679 electric vehicles were sold in Norway

OEM	Import	National sales	SUM
Nissan	189	2298	2487
Mitsubishi	7	665	672
Citroen	47	513	560
Peugeot	40	407	447
Toyota		171	171
Opel		141	141
Tesla	6	32	38
Ford	3	31	34
Renault	2	24	26
Buddy Electric	2	22	24
Micro-Vett	15	9	24
Think	5	17	22
Tazzari	1	9	10
Mia		9	9
Fisker		6	6
Unknown	1	3	4
Chevrolet US	2	1	3
Piaggio		1	1
SUM	**320**	**4359**	**4679**

EVs sold in 2012 as share of total car sales



	France	Norway	Germany	UK	Sweden	Denmark	Ireland	Portugal
Evs sold	5663	3950	3755	2237	947	537	137	65
% of total sale	0,30	2,86	0,12	0,11	0,34	0,31	0,17	0,07

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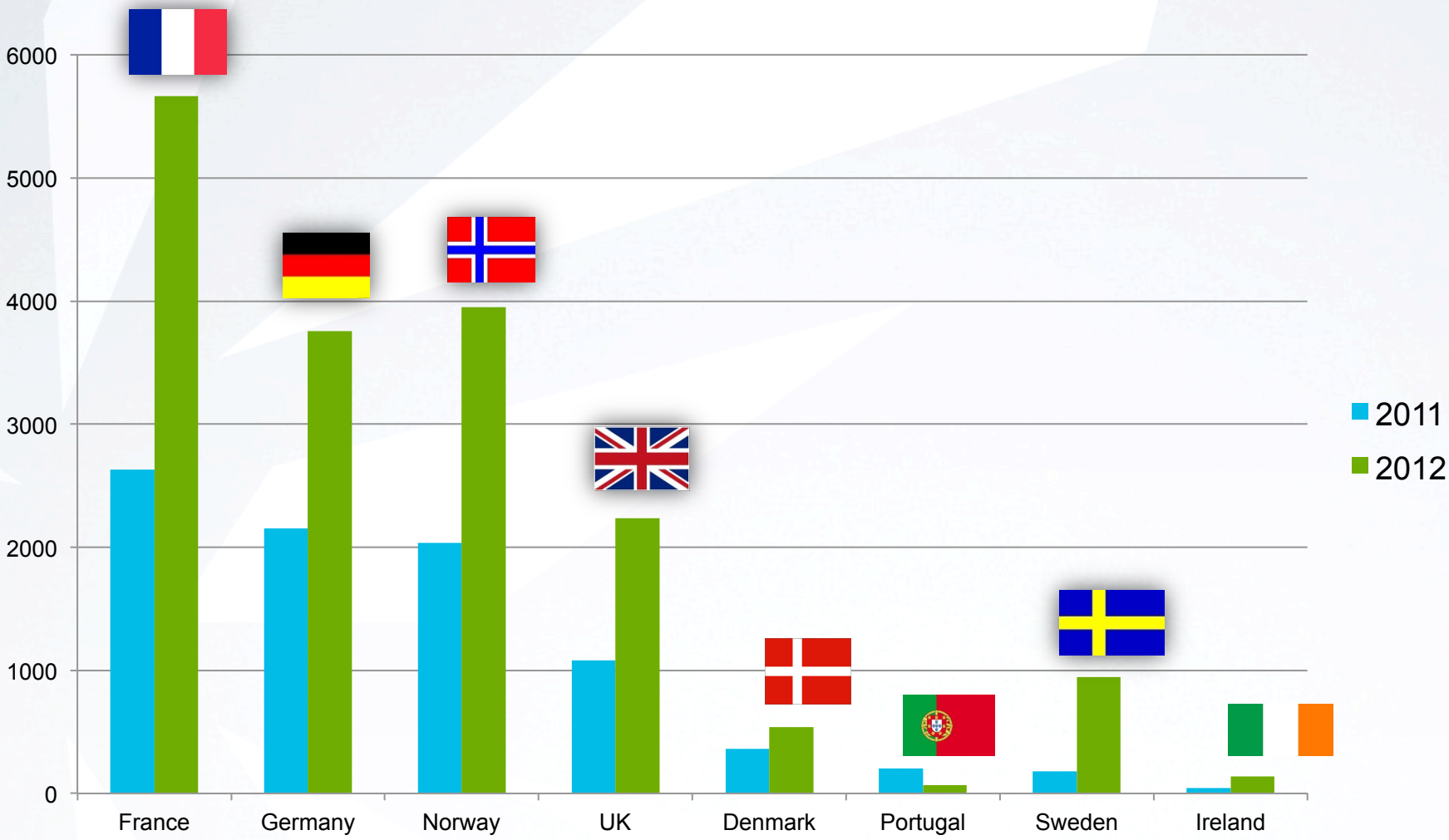
Evolution of sold EVs 2011 to 2012



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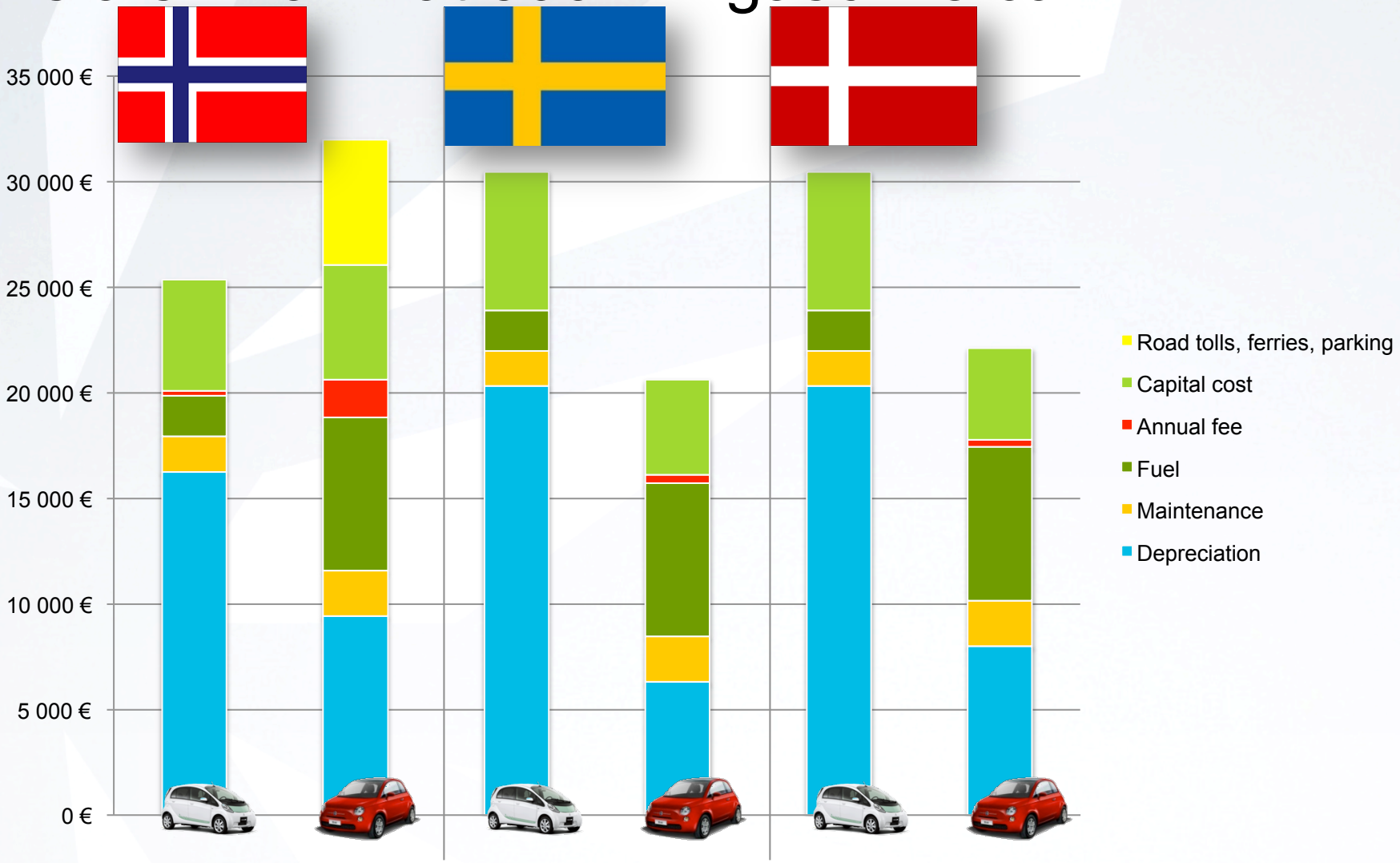
Norwegian BEV & FCEV incentives:

- No Import Tax
- No VAT
- Very low annual registration fee
- Free parking in publicly owned parking spaces
- No road toll
- Access to bus lanes
- Free admission on national road ferries for the car

Incentives in selected European countries

	Norway	Sweden	Denmark	Germany	Portugal	Ireland
Financial incentives	Yes	Yes	Yes	Yes	Yes	Yes
Access to bus lane	Yes	Limited				
Free parking and no road toll	Yes	Limited	Some	Some		
Charging infrastructure	Yes	Some	Yes		Yes	Yes

Total Cost of Ownership for Mitsubishi i-MiEV vs a similar Fiat 500 1.2 gasoline car



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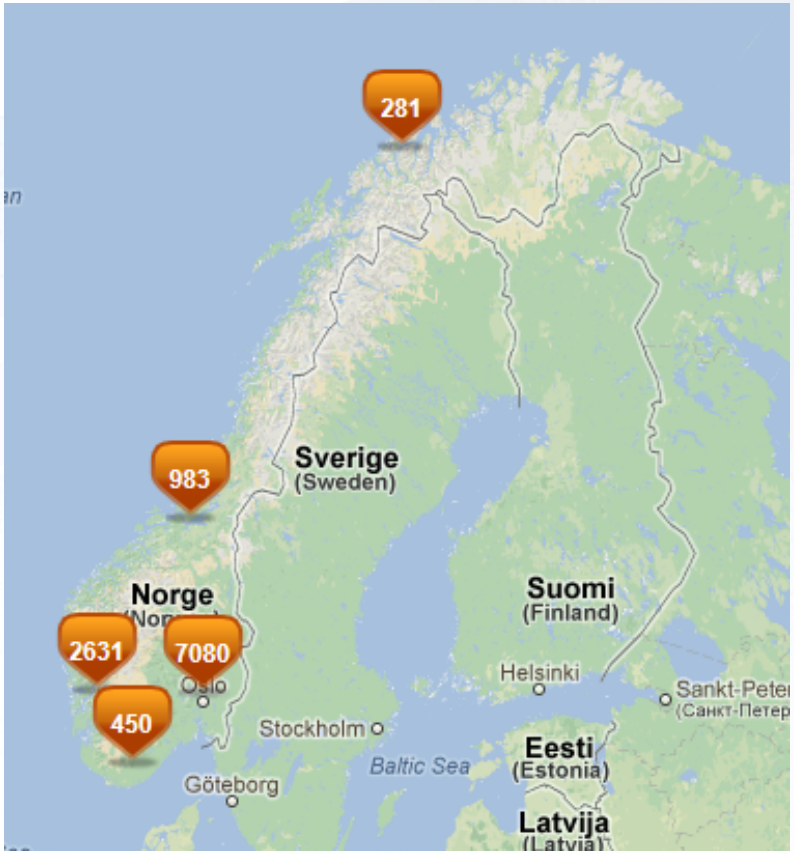
Tipping point in the big cities is reached

- Incentives such as parking, access to the public fields and no road toll, are fitting commuters in urban areas very well
- The rural areas are now following



EV evolvement

- Technology
- Prices
- Evolution of battery technology
- The development of charging points


1: Market immaturity
2: Mass market introduction
3: Mature market

- EV presents significant usability sacrifices in terms of range and comfort relative to gasoline cars
- TCO for EVs realtive to other cars is poor
- EV infrastructure is poor
- Heavy government incentives needed to make EVs attractive
- Norwegian example: Access to bus lanes and significant economical incentives made BEVs attractive to suburban commuters around Oslo, mainly due to significant time savings

- EV techology improves, users no longer have to compromise on comfort and safety. Range remains an issue. But is good enough for daily commutes
- EV TCO reduction means EVs are competitive with gasoline cars in certain segments
- Larger market potential means improved EV infrastructure.
- Government incentives still needed to ensure EV competitiveness. Stability and predictability is key
- Norwegian example: All incentives from phase 1 upheld. Financial incentives guaranteed through 2017. EVs become commonplace in urban areas, EV sales exceed 3% of total car sales in 2012. EV adoptation in rural areas begin, purely motivated by cost savings

- EVs are an established niche in the car market, and are sold through regular dealerships on regular conditions. An EV is "just another car". EVs still have limited range, but compensates by being a good daily driver.
- EV TCO is competitive in several segments, large enough to sustain a viable EV market
- EV infrastructure is being built commercially as demand grows
- Incentives can be gradually reduced or removed, as techonlogy improvements and price reductions ensures EV competitiveness


1: Market immaturity
2: Mass market introduction
3: Mature market

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Thank you for your attention!

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