



NKL 2017 benchmark study - Utrecht, October 2017

Maturity model for public EV charging FROM COST REDUCTION TO A PROFESSIONAL MARKET

NKL, the independent knowledge platform for EV charging infrastructure, presents the results of the 2017 costing benchmark study. The cost of public EV charging infrastructure is this year continuing to decline by approximately 35% since 2013. Together with governments, knowledge institutions and market actors, the NKL's assessment is that in 2017 the focus will shift from cost reduction to market professionalisation. To enable the market to develop further, the NKL is introducing the public EV charging market maturity model.

Trend in cost reduction continues towards 40%

The trend in cost reduction observed in 2016 has continued in 2017. Non-recurring costs fell by almost 35% in the period from 2013 (baseline year) to 2017. This trend, which includes increased power consumption (kWh) per charging station per day, is expected to continue until 2020. On this basis the benchmark study predicts a drop in one-off and periodic costs in 2020 of up to 40% – further bolstering the business case for public charging.

2016 benchmark study recommendations support 2017 cost reductions

Currently, the central focus is on how we can together achieve a sustainable mature market for the public EV charging infrastructure and on what challenges we will encounter in the coming years. Evaluation of the 2016 benchmark study recommendations reveals that broad progress has been made. Several NKL projects have made knowledge publicly available and this has contributed to the cost reductions achieved thus far – examples include the basic charge point agreements and the national portal for public charge point requests.

From cost reduction to a professional market

A critical area of attention in recent years has been cost reduction, with the result that tenders are already being made that no longer involve subsidy. The priority is now shifting to professionalisation of the young charging infrastructure market to develop it into a healthy and efficient market.

NKL maturity model for public EV charging

Within the framework of the 2017 benchmark study NKL is introducing the maturity model for public EV charging. This model will enable the assessment of the market from multiple perspectives – actual levels and projected levels for 2020 are charted for nine distinct dimensions. Besides cost reduction, the model focuses on the end-user, available expertise, and processes from application to management. The model makes it possible to determine maturity at both individual and market level. Governments and market actors can use the model to determine the specific dimensions to which they should devote their energies in the coming years. Two key areas for development are: professionalisation of the design of application and

management processes; and improved customer focus. Concerns exist regarding the lack of available expertise (human capital) in this rapidly growing sector. An additional area for attention is the impact of impending growth on the technology and the charging infrastructure.

The maturity model is detailed in the figure and table on the following pages. Market actors, Knowledge institutions and governments can use it determine their own status and aims in order to align and set objectives.

NKL 2017 benchmark study partners

Central government, municipalities, market actors, knowledge institutions, energy suppliers, grid operators and provincial authorities.

Information and contact

NKL 2017 benchmark study (in Dutch): Van kostenreductie naar een professionele markt
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Table: Results of the benchmark study indicating costs and revenues for public charge points in the period 2013-2020

Cost type		Benchmark 2013	Benchmark 2016	Benchmark 2017	Estimate 2020 (2017)
Purchase price for charging point (3x25A, 2 Sockets)	Total	€ 2,000	€ 1,400	€ 1,330	€ 1,100
Determining location	Total	€ 700	€ 550	€ 320	€ 220
Installation parking space	Total	€ 700	€ 450	€ 380	€ 350
Grid operator charge for connection	Total	€ 655	€ 655	€ 690	€ 690
Contractor charge for placement	Total	€ 600	€ 400	€ 390	€ 360

Cost type		Benchmark 2013	Benchmark 2016	Benchmark 2017	Estimate 2020 (2017)
Grid connection, periodic costs 3x25A	Year	€ 210	€ 210	€ 210	€ 210
Communications costs	Year	€ 125	€ 75	€ 50	€ 30
Insurance premium and/ or damage costs	Year	€ 25	€ 25	€ 25	€ 10
Maintenance/ repair	Year	€ 450	€ 275	€ 270	€ 230
Service for user problems	Year	€ 25	€ 25	€ 25	€ 25

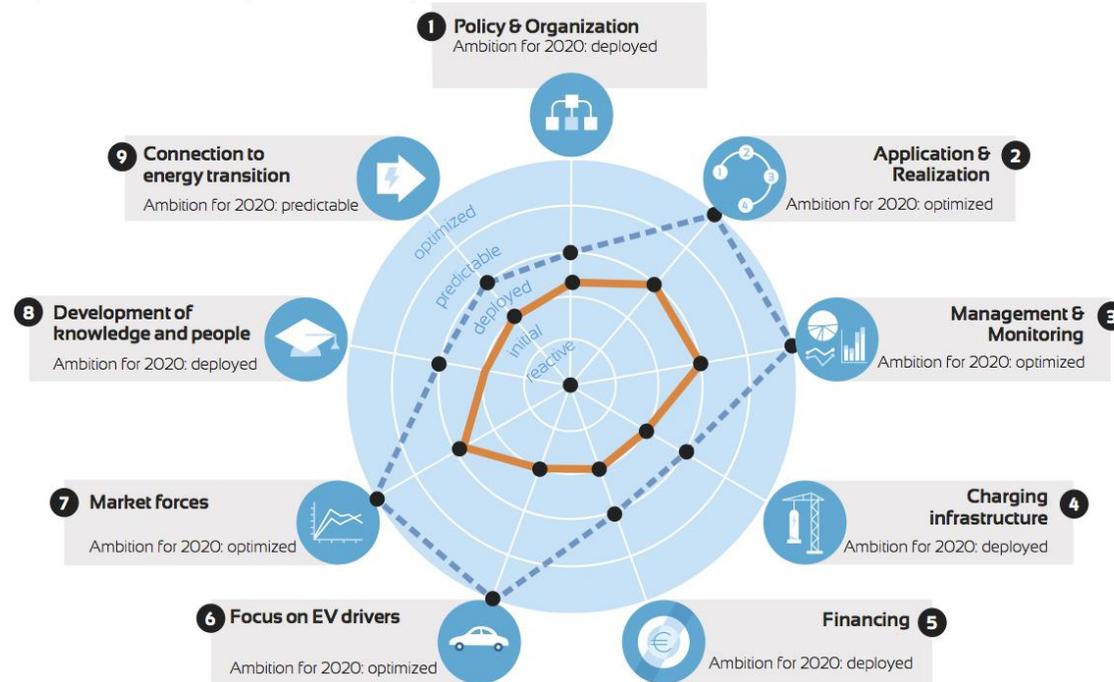
Cost type		Benchmark 2013	Benchmark 2016	Benchmark 2017	Estimate 2020 (2017)
Compensation for energy provider	kWh	€ 0.06	€ 0.06	€ 0.06	€ 0.03
Energy taxes	kWh	€ 0.10	€ 0.10	€ 0.05	€ 0.05
Depreciation period	Year	5	7	9,2	10
Sale of kWh excluding VAT	kWh	€ 0.25	€ 0.28	€ 0.27	€ 0.23
Energy sales (kWh)	Day	5	8.5	8.6	11.8

Maturity model: Public Charging of Electric Vehicles

Working towards a professional market



The market for public charging infrastructure is entering a new phase. Focus is shifting from costs to professionalization. The goal: to realize an efficient, independent and service-oriented market with lower prices. Together with government, market and scientific parties, NKL has developed a maturity model.

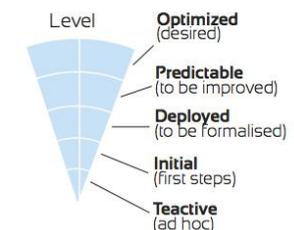


Complete the model for yourself:



Current status and ambition

— Current
- - - 2020



- 1 How is policy organized within the various municipalities/regions/provinces? To what degree is it integrated into other processes?
- 2 How has the process of applying for and realizing a public charging point been arranged?
- 3 How is management and monitoring of the public charging infrastructure carried out within the various municipalities/regions/provinces?
- 4 How are public charging points being installed in the context of optimizing the charging infrastructure?
- 5 To what degree is a competitive marketplace – one that does not rely on subsidies for installation, operation or innovation – present?
- 6 Are the people driving EVs being taken into account?
- 7 To what degree does an open and competitive marketplace exist?
- 8 Will there be enough knowledge and people available to allow us to meet the projected targets for growth?
- 9 Is the roll-out of charging infrastructure being sufficiently coordinated with the energy transition?