



# Ambitious Climate and Energy Policy

## *The case of Oslo municipality*

**Oskar Njaa**

Advisor  
The Bellona Foundation

**Kyiv**  
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# Green Capital of Europe

- Awarded each year to an European city with more than a 100.000 citizens
- **2017: 14 candidates applied**, among them: Ghent (Belgium), Lahti (Finland), Lisbon (Portugal) and Tallinn (Estonia)
- Criteria: Climate policy, air quality, green innovation, public transport, biodiversity, water quality, outdoor life
- **Oslo ranked highest in 8 out of 12 categories**



## Criteria

- Local contribution to fighting global climate change (Oslo scores best)
- Transport (Oslo scores best)
- Green lungs in the city (Lahti number 1. Oslo number two)
- Nature and biodiversity (Oslo scores best)
- Air quality (Oslo scores best)
- Noise pollution (Oslo scores best)
- Waste production and treatment (Oslo scorer best)
- Water usage (Lahti number 1. Oslo number six)
- Handling of waste waters (Lahti number one. Oslo number seven)
- Environmental innovation and sustainable workplaces (Oslo scorer best)
- Energy performance (Oslo scores best)
- Local authorities' environmental management (Gent number one. Oslo number two)

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# Why Oslo in 2019?

**Goal of:** 836.000 ton reduction in emissions by 2020

**Achievements:**

- World EV-capital: 30% of all new cars bought are electric.
- Recycling – connected to transport
- 90% of Oslo's citizens live less than 300m from frequent public transport
- 98% of citizens live less than 300m from green lungs.

## Even a Green Capital has its problems...

- **Main issue: Air pollution**

- 185 citizens suffer a premature death due to air pollution annually
- 1753 healthy years of life lost by Oslo's population annually

- **Worst during winter time:**

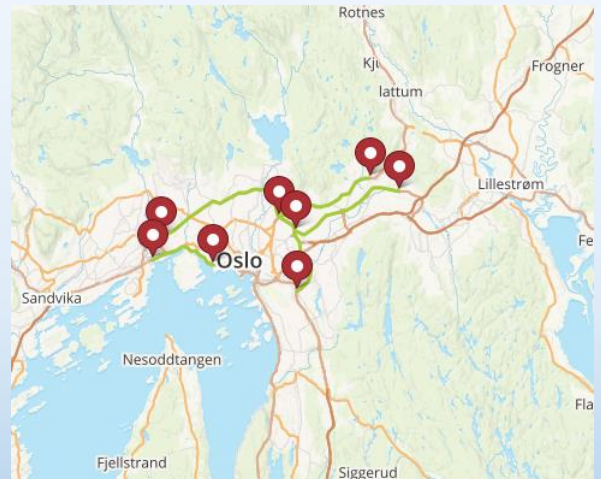
1. Wood heating of houses
2. Use of studded tires (creates fine-grained airborne particles)
3. Higher emissions from cars due to colder weather

- **And, 2/3s of CO<sub>2</sub>-emissions from the transport sector**



## Solutions: Escaping the diesel reality

- **Environmental speed limit**
  - Higher speeds create more pollution, both from road wear and tear, as well as from fuel-use.
- **Subject of debate:**
  - Pilot project from 2004-2013
  - Can speed limits be adjusted due to environmental concerns?
  - Law changed in 2014, so that protection of «public interest» in the law now includes environmental considerations





## Temporary prohibition – Diesel cars

- On days with cold weather and little wind
- Fines for violations
- Aided by the road pricing system as well as local law enforcement.
- Exceptions for necessary transport, like emergency services



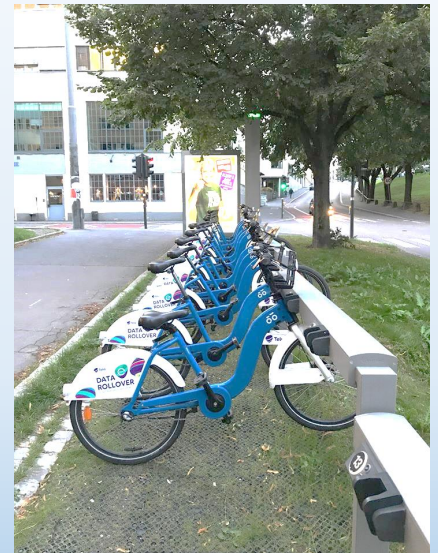
## Road pricing – differentiation by pollution

- Increasing fees related to type of vehicle, as well as the type of fuel
  - Free for EVs
  - Standard price for gasoline-driven personal cars
  - Additional fees for diesel-driven vehicles, heavy transport
  - Rush hour most expensive
  - Hot debate



# Bicycles

- Oslo's bicycle strategy: 16% of all transport by 2025
- Current authorities: **25% of all transport by 2025.**
- From 2015 to 2016, the growth in bicycle traffic in Oslo were among the top 5 cities in the world – growing by 18%. In Norway as a whole, growth was at 7%.
  - **Despite weather conditions. Increase in all-year use.**
- **Dedicated bicycle lanes or roads.**
- Statistics measured by 43 counters around the city – by EcoCounter
- Worth mentioning: City bike system
- Electric bikes, Segway, skateboards



## Shore power – Oslo Harbor

- Oslo harbor not big: But, **cruise ships docked in Oslo harbor emit as much as 13 000 cars every day**
- Harbors are owned by municipalities in Norway



### Political decision: Electrification

- Goal of providing shore power to cruise ships and local marine transport
- Why?  
Emission reduction, noise reduction, safer work environment.
- The harbor as an electric hub?

# Shore power - Challenges and incentives

## **Main challenge:**

- Getting companies to invest in proper equipment to allow for use of electricity when docked. Reconstruction or new ships.

## **Incentives:**

- Differentiation of harbor fees for ships.
- Electrification **is profitable**
- PR – From dirty fossils to clean hydro power
- **What if energy was not clean?**
  - Still a smart decision – Centralizing emissions and energy efficiency.

# Emission-free construction sites

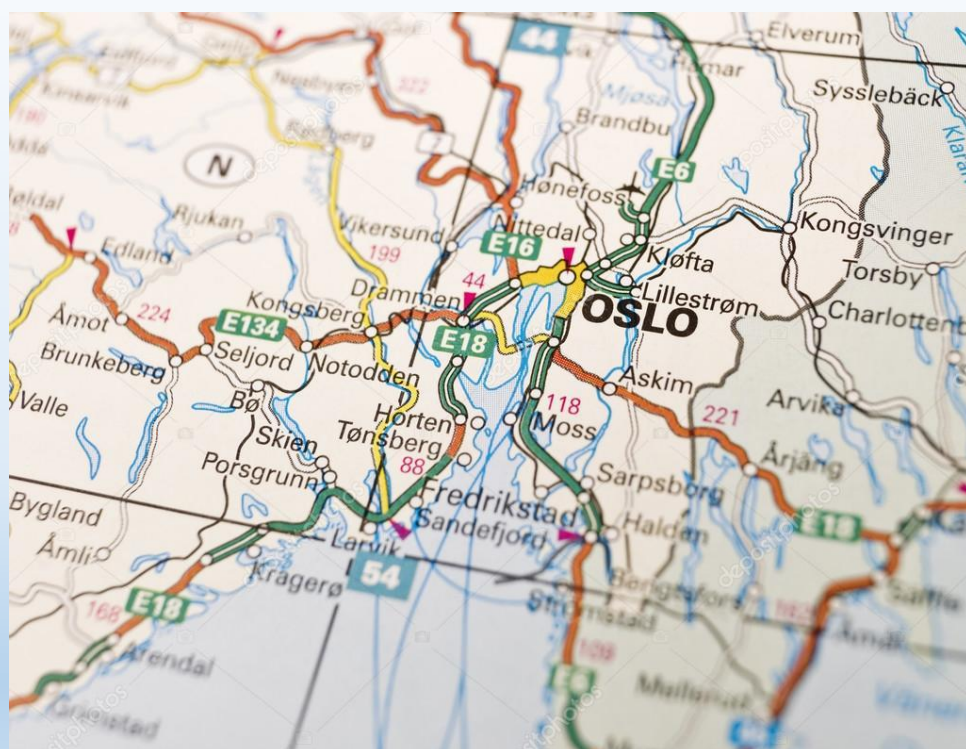
An incentive for deploying RES in the industry



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**Local potential:**  
for developing solar power..









#### FORVENTET PRODUKSJON

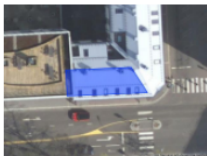
### 16 årsforbruk

Anlegget ditt vil produsere omtrent 10 400 kWh det første året. I løpet av levetiden (30 år) utgjør dette omtrent 16 årsforbruk på 20 000 kWh.

#### SYSTEMSTØRRELSE

10,6 kW<sub>p</sub>  
fordelt på  
40 paneler

#### DITT TAK



Prisene forutsetter at taket ditt er tekket med dobbelkrum takstein. Vela annet taktække

#### MILJØ

### Fjern 143 538 kg CO<sub>2</sub>

Det tilsvarer en biltur på 550 745 km! På denne distansen kan du reise fra Oslo til Bodø 459 ganger!

I henhold til [NVEs varedeklarasjon](#) vil anlegget ditt i løpet av sin levetid kunne fjerne 143 538 kg CO<sub>2</sub>.

## Online information and purchase system

#### ØKONOMI

### Spas 12 705 kr i året

Med et solcelleanlegg på taket trenger du ikke kjøpe så mye strøm fra strømleverandøren din. Vi estimerer at du kan spare 381 137 kr i løpet av 30 år. [Se utregning](#)

#### OFFENTLIG STØTTE ?

### 23 250 kr

Når anlegget er installert får du **utbetalt 23 250 kr** i offentlig støtte fra Enova.

#### INSTALLASJON

### Desember 2017

Estimert installasjonsdato. Vi jobber på spreng for å få opp anlegg så fort som mulig. Gå videre for å

#### ALT INKLUDERT

Uansett hvordan du velger å betale for installasjonen er alt av utstyr og arbeid knyttet til installasjon, tilkobling og ferdigmelding er inkludert.

#### SELG OVERSKUDD

### Nabostrom

Vi hjelper deg å selge overskuddsstrøm til naboen. **Otovo betaler 100 øre** for hver kWh du ikke bruker selv. [Les mer](#)

#### NYHET! VELG PANELTYPE

Vi tilbyr nå standard- og premiumpaneler. Standardpaneler har en effekt på 265 W og er blå. Premiumpaneler har en effekt på 290 W (høyeffektive) og har en stilren, sort finish.

Standard

Premium

#### PRIS: DIREKTEKJØP ?

159 723 kr

– 23 250 kr

**Totalt 136 473  
kr**

Din totalpris, fratrukket offentlig støtte.

Chat

# Incentives for solar power installation

## - Private homes

Grant for such projects on a national level.

**10 000 NOK per project as a basis**

**+ 1250 NOK per installed kilowatt**

**up to a maximum of 15 kW (max 10 000 + 18750 = 28750)**

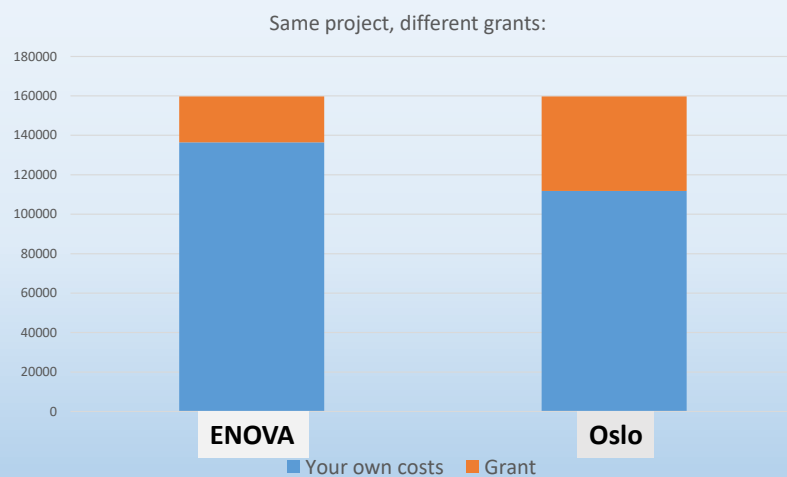
**ENOVA**



- **Oslo municipality** operated one grant for installation of solar power, up to and including 2017.
- Only such local grant in Norway.
  - **Covers 30% of total costs.**
- A grant for private home owners - 8 million NOK (aprox. 815 000 EUR)

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# ENOVA vs Oslo municipality



**Comments from the green party:**  
Political challenges in making a city green

Thank you for your attention



**Web:**

[www.bellona.org](http://www.bellona.org)

Oskar Njaa

**oskar@bellona.no**

Advisor

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