

ACTION

EU Life EconomisE Energy Efficiency Solution Cards

EconomisE



LIFE16 GIC/FI/000072

This communication reflects only the EconomisE project's view, and the EASME/ Commission is not responsible for any use that may be made of the information it contains.

Concrete measures and
best practice energy
efficiency investments
carried out in Finnish
cities and municipalities

#ENERGIALOIKKA

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ACTION

28,6 kWp Solar Power Plant at Pajuniitty Kindergarden

LOCATION

Vihti, Pajuniitty

IMPLEMENTATION

2018

INVESTMENT

27 500 €

OPERATIVE

30 years

PAYBACK PERIOD

11 years

INTERNAL RATE OF RETURN

8 %

SAVINGS PER YEAR

2 500 €

REDUCED EMISSIONS

est. 3 650 kg CO₂e / year

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[More information](#)

Image: Vihti

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ACTION

From Oil to Air-to-Water Heat at Jakkukylä School

LOCATION

Jakkukylä School, Ii

IMPLEMENTATION

2018

INVESTMENT

60 000 €

OPERATIVE

15 - 20 yrs

PAYBACK PERIOD

4,4 / 5,5 years

INTERNAL RATE OF RETURN

16 – 22%**

SAVINGS PER YEAR

10 900 €

REDUCED EMISSIONS

22 000 kg CO₂e / year

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[More information](#)

Image: Heidi Takalo

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* 4,4 years including 20% subsidy, 5,5 years without subsidy ** Depending on subsidy and useful life

ACTION

Tenement in Simo Switches from Oil Heating to Air-to-Water Heatpump

LOCATION

Simo

IMPLEMENTATION

2018

INVESTMENT

251 € / kk

OPERATIVE

20 years

PAYBACK PERIOD

7 years

INTERNAL RATE OF RETURN

13 %

SAVINGS PER YEAR

3 012 €

REDUCED EMISSIONS

11 400 kg CO₂e / year

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ACTION

Solar Panels at a Nursing Home in Kirkkonummi

LOCATION

Kirkkonummi

IMPLEMENTATION

2019

INVESTMENT

32 000 €

OPERATIVE

20 years

PAYBACK PERIOD

11 years

INTERNAL RATE OF RETURN

7 %

SAVINGS PER YEAR

3 050 €

REDUCED EMISSIONS

4 424 kg CO₂e / year

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Image: Benny Vilander

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ACTION

Reduction of Water consumption in Kirkkonummi Healthcenter

LOCATION

Kirkkonummi

IMPLEMENTATION

2019

INVESTMENT

6 500 €

OPERATIVE

5 years

PAYBACK PERIOD

0,9 years

INTERNAL RATE OF RETURN

106 %

SAVINGS PER YEAR

7 100 €

REDUCED EMISSIONS

6 900 kg CO₂e / year

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Image: Tarja Harhila

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ACTION

Vieremä Kindergarten Solar Panels

LOCATION

Lohja

IMPLEMENTATION

2019

INVESTMENT

18 087 €

OPERATIVE

30 years

PAYBACK PERIOD

12 years

INTERNAL RATE OF RETURN

7 %

SAVINGS PER YEAR

1 500 €

REDUCED EMISSIONS

2 200 kg CO₂e / year

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Image: Fimaka Oy

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ACTION

Pusula School Solar Panels

LOCATION

Lohja

IMPLEMENTATION

2019

INVESTMENT

37 599 €

OPERATIVE

30 years

PAYBACK PERIOD

11 years

INTERNAL RATE OF RETURN

9 %

SAVINGS PER YEAR

3 600 €

REDUCED EMISSIONS

5 200 kg CO₂e / year

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Image: Fimaka Oy

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ACTION

Källhagen School Solar Panels

LOCATION

Lohja

IMPLEMENTATION

2019

INVESTMENT

37 599 €

OPERATIVE

30 years

PAYBACK PERIOD

8 years

INTERNAL RATE OF RETURN

13 %

SAVINGS PER YEAR

5 100 €

REDUCED EMISSIONS

7 400 kg CO₂e / year

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Image: Fimaka Oy

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ACTION

Metsola School Solar Panels

LOCATION

Lohja

IMPLEMENTATION

2019

INVESTMENT

32 655 €

OPERATIVE

30 years

PAYBACK PERIOD

11 years

INTERNAL RATE OF RETURN

9 %

SAVINGS PER YEAR

3 050 €

REDUCED EMISSIONS

4 400 kg CO₂e / year

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Image: Fimaka Oy

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ACTION

Energy Renovation in Kirkkonummi, Significant Reduction in Oil Consumption

LOCATION

Kirkkonummi

IMPLEMENTATION

2019

INVESTMENT

118 000 €

OPERATIVE

20 years

PAYBACK PERIOD

5,9 years

INTERNAL RATE OF RETURN

16 %

SAVINGS PER YEAR

20 000 €

REDUCED EMISSIONS

85 000 kg CO₂e / year

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Image: Outi Manninen

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ACTION

Solar Energy Use Maximised with Battery Storage at Haikolan talo in Nurmes

LOCATION

Haikolan talo,
Nurmes

IMPLEMENTATION

2017

INVESTMENT

18 000 €

OPERATIVE

30 years

PAYBACK PERIOD

15 years

INTERNAL RATE OF RETURN

5 %

SAVINGS PER YEAR

1 200 €

REDUCED EMISSIONS

780 kg CO₂e / year

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ACTION

Energy Savings from Switching to LED Lighting in Raisio Church Maintenance Hall

LOCATION

Raisio Church
Raisio

IMPLEMENTATION

2017

INVESTMENT

4 100 €

OPERATIVE

17 years

PAYBACK PERIOD

5.6 years

INTERNAL RATE OF RETURN

18 %

SAVINGS PER YEAR

740 €

REDUCED EMISSIONS

1 200 kg CO₂e / year



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ACTION

Municipality of Tohmajärvi Awarded for Energy Savings in Sports Centre from Swapping to LEDs

LOCATION

Tohmajärvi Sports Centre,
Tohmajärvi

IMPLEMENTATION

2017

INVESTMENT

4 300 €

OPERATIVE

15 years

PAYBACK PERIOD

2.9 years

INTERNAL RATE OF RETURN

34 %

SAVINGS PER YEAR

1 500 €

REDUCED EMISSIONS

2 000 kg CO₂e / year

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ACTION

Energy Savings at a Golf Course Club House from the Installation of Remote Controllable Heat Pumps

LOCATION

**Kanavagolf Vääksy Oy,
Asikkala**

IMPLEMENTATION

2017

INVESTMENT

16 500 €

OPERATIVE

15 years

PAYBACK PERIOD

7 years

INTERNAL RATE OF RETURN

13%

SAVINGS PER YEAR

2 500 €

REDUCED EMISSIONS

5 250 kg CO₂e / year

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Image: Kanavagolf Vääksy Oy



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ACTION

City of Hamina Awarded for Energy Savings at the Ruissalo Sports Centre from Swapping to LED Lights

LOCATION

**Ruissalo Sports Centre,
Hamina**

IMPLEMENTATION

2017

INVESTMENT

34 000 €

OPERATIVE

11 years

PAYBACK PERIOD

4 years

INTERNAL RATE OF
RETURN

22 %

SAVINGS PER YEAR

8 400 €

REDUCED EMISSIONS

6 746 kg CO₂e / year

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[More information](#)

Image: Venla Riekkinen

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ACTION

Koijärvi Church Reduces Electricity Consumption by 40% through Optimised, Remote Controlled Heating

LOCATION

**Koijärvi Church
Forssa**

IMPLEMENTATION

2017

INVESTMENT

9 000 €

OPERATIVE

10 years

PAYBACK PERIOD

1.2 years

INTERNAL RATE OF RETURN

83%

SAVINGS PER YEAR

7 460 €

REDUCED EMISSIONS

8 000 kg CO₂e / year

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ACTION

10 Households Acquire Solar Panels in Turn-key Style through Joint Acquisition in Southwest Finland

LOCATION

**Mynämäki, Masku,
Pöytyä, Uusikaupunki**

IMPLEMENTATION

2017

INVESTMENT

80 000 €

OPERATIVE

30 years

PAYBACK PERIOD

18 years

INTERNAL RATE OF RETURN

4 %

SAVINGS PER YEAR

4 500 €

REDUCED EMISSIONS

9 000 kg CO₂e / year

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Image: Maiju Okarinen, Valonia

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ACTION

40 Solar PV Systems Acquired for Households and Firms through Joint Procurement in North Karelia

LOCATION

Households and firms in North Karelia

IMPLEMENTATION

2017

INVESTMENT

300 000 €

OPERATIVE

30 years

PAYBACK PERIOD

17 years

INTERNAL RATE OF RETURN

4 %

SAVINGS PER YEAR

18 000 €

REDUCED EMISSIONS

36 000 kg CO₂e / year

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Image: Erno Nykänen



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ACTION

City of Hanko Awarded for Instalment of 12 Solar Plants with 700 kW Combined Power

LOCATION

City of Hanko

IMPLEMENTATION

2018

INVESTMENT

900 000 €

OPERATIVE

30 years

PAYBACK PERIOD

14 years

INTERNAL RATE OF RETURN

6 %

SAVINGS PER YEAR

63 000 €

REDUCED EMISSIONS

130 000 kg CO₂e / year

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ACTION

Nationwide Joint Procurement of Solar Systems Underway - Tens of Municipalities Already Onboard

LOCATION

Municipalities all over Finland

IMPLEMENTATION

2018

INVESTMENT

1 300 000 €

OPERATIVE

30 years

PAYBACK PERIOD

14 years

INTERNAL RATE OF RETURN

6 %

SAVINGS PER YEAR

90 000 €

REDUCED EMISSIONS

180 000 kg CO₂e / year

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Solar panels atop the Finlandia hall. Image: Johanna Saario



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ACTION

Kirkkonummi Parish Invests in Energy Savings from Smart Heating Optimisation in Protected Church

LOCATION

Haapajärvi wooden church
Veikkola (Kirkkonummi)

IMPLEMENTATION

2018

INVESTMENT

5 332€

OPERATIVE

10 years

PAYBACK PERIOD

14 years*

INTERNAL RATE OF RETURN

-6% *

SAVINGS PER YEAR

~380 € *

REDUCED EMISSIONS

386 kg CO₂e / year *



Image: Venla Riekkinen

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* Usage of church and its heating has increased post instalment for external reasons so results aren't comparable

ACTION

Solar Power Plant for Micropolis Technology Centre in Ii

LOCATION

Micropolis
Ii

IMPLEMENTATION

2018

INVESTMENT

87 000 €

OPERATIVE

30 years

PAYBACK PERIOD

12 years

INTERNAL RATE OF RETURN

7 %

SAVINGS PER YEAR

7 070 €

REDUCED EMISSIONS

9 660 kg CO₂e / year

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Image: Micropolis

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ACTION

1800 Panel Solar Plant as Power Purchase Agreement at the Rauma Seaside Industry Park

LOCATION

Seaside Industry Park
Rauma

IMPLEMENTATION

2018

INVESTMENT

0 €

OPERATIVE

30 years

PAYBACK PERIOD

0 years

INTERNAL RATE OF RETURN

0 %

SAVINGS PER YEAR

0 €

REDUCED EMISSIONS

43 680 kg CO₂e / year

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ACTION

Installation of Ventilation Heat Recovery in Three Apartment Houses Alongside Combined Heat & Power

LOCATION

As oy Sulkapolku 6,
Helsinki

IMPLEMENTATION

2018

INVESTMENT

209 600 €

OPERATIVE

20 years

PAYBACK PERIOD

7,6 years

INTERNAL RATE OF
RETURN

12%

SAVINGS PER YEAR

27 600 €

REDUCED EMISSIONS

79 120 kg CO₂e / year

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Image: M. Manner, Tom Allen Senera



[More information](#)

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CARBON
EXIT

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ACTION

Porvoo Parish Awarded for Changing Heat Source from Oil to Geothermal, Saving Up To 30 000 Litres of Oil

LOCATION

Porvoo Cathedral
Porvoo

IMPLEMENTATION

2018

INVESTMENT

350 000 €

OPERATIVE

20 years

PAYBACK PERIOD

10 years

INTERNAL RATE OF RETURN

8 %

SAVINGS PER YEAR

35 000 €

REDUCED EMISSIONS

83 000 kg CO₂e / year

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Image: Teemu Helonheimo



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ACTION

1000 Panel Expansion Makes Salo City Solar Plant Second Largest in Finland with 1 MWp

LOCATION

Salo High School
Salo

IMPLEMENTATION

2018

INVESTMENT

1 300 000 €

OPERATIVE

30 years

PAYBACK PERIOD

12,5 years

INTERNAL RATE OF RETURN

7 %

SAVINGS PER YEAR

102 000 €

REDUCED EMISSIONS

106 250 kg CO₂e / year

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[More information](#)

Image: Areva Solar

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ACTION

Kiilto Combines Waste Heat Recovery from Glue Polymerisation with Ground Sourced Heat Pumps

LOCATION

**Kiilto Oy
Lempäälä**

IMPLEMENTATION

2018

INVESTMENT

400 000 € *

OPERATIVE

20 years

PAYBACK PERIOD

4 - 5 yrs *

INTERNAL RATE OF RETURN

19 - 25 % *

SAVINGS PER YEAR

80 000 €

REDUCED EMISSIONS

310 000 kg CO₂e / year

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Image: Laura Heinovaara

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* 400 000 € and payback 5 years not including subsidy, 320 000 € and 4 years with subsidy

ACTION

From Oil to Geothermal / Ground Sourced and Air-to-Water Heat at Hotel and Nature Centre in Koli

LOCATION

Break Sokos Hotel, Luontokeskus Ukko, Koli, Lieksa

IMPLEMENTATION

2018

INVESTMENT

984 000 €

OPERATIVE

30 years

PAYBACK PERIOD

11 years

INTERNAL RATE OF RETURN

8 %

SAVINGS PER YEAR

87 000 €

REDUCED EMISSIONS

326 000 kg CO₂e / year

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Image: Break Sokos Hotel Koli

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ACTION

Finnish Environment Institute SYKE Relocates Headquarters to Improve Energy Efficiency

LOCATION

Finnish Environment Institute, Helsinki

IMPLEMENTATION

2018

INVESTMENT

1 300 000 €

OPERATIVE

20 years

PAYBACK PERIOD

4,5 years

INTERNAL RATE OF RETURN

22 %

SAVINGS PER YEAR
288 000 €

REDUCED EMISSIONS

580 000 kg CO₂e / year

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[More information](#)

Image: Teemu Helonheimo

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SYKE

ACTION

42 kWp Solar Panel Instalment with Live Production Information atop the Tytyri Water Treatment Plant

LOCATION

Tytyri Water Treatment Plant, Lohja

IMPLEMENTATION

2017

INVESTMENT

32 800 €

OPERATIVE

30 years

PAYBACK PERIOD

8 years

INTERNAL RATE OF RETURN

11 %

SAVINGS PER YEAR

3 900 €

REDUCED EMISSIONS

4 100 kg CO₂e / year

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LOHJA
Järvikaupunki

