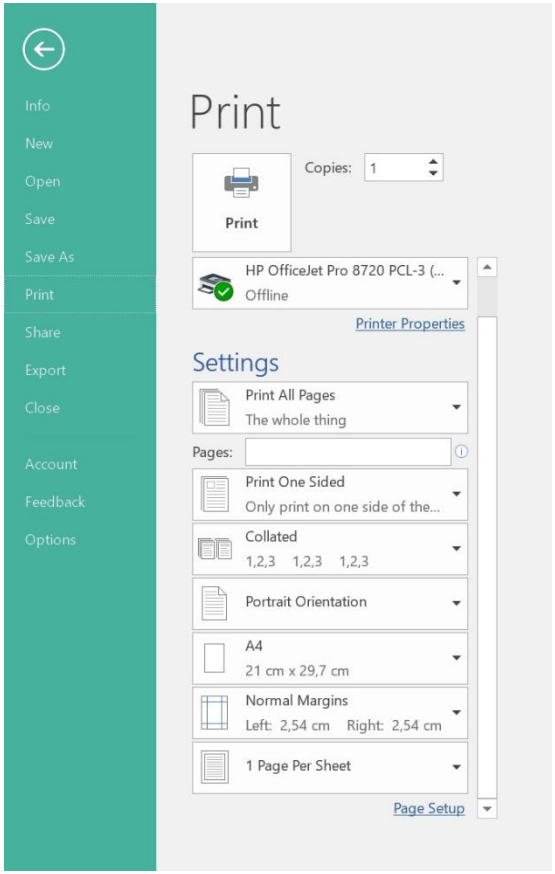
CASE

# TENDER SOLAR PROJECT

Monday, January 27, 2020

# PRINTING THIS DOCUMENT




As an environmentally conscious organization, E&C asks you to consider whether it is really necessary to print this presentation. If yes, please change the print layout to multiple slides per page.

# BELGIUM

# COMPANY DESCRIPTION

- Company active in household products
- Yearly consumption of 30.000 MWh on the site where the solar project will be developed
- Nearly 7000 solar panels on more than 22.000m²
- Solar project will cover 6 to 7% of the yearly consumption
- Hedged electricity price for 2018: 70 €/MWh (all-in: commodity & non-commodity)

# TENDER PROCESS

- Offers of 10 different suppliers
- 3 different rounds
- Contract period of 15 years because return on investment was better than on 10 years

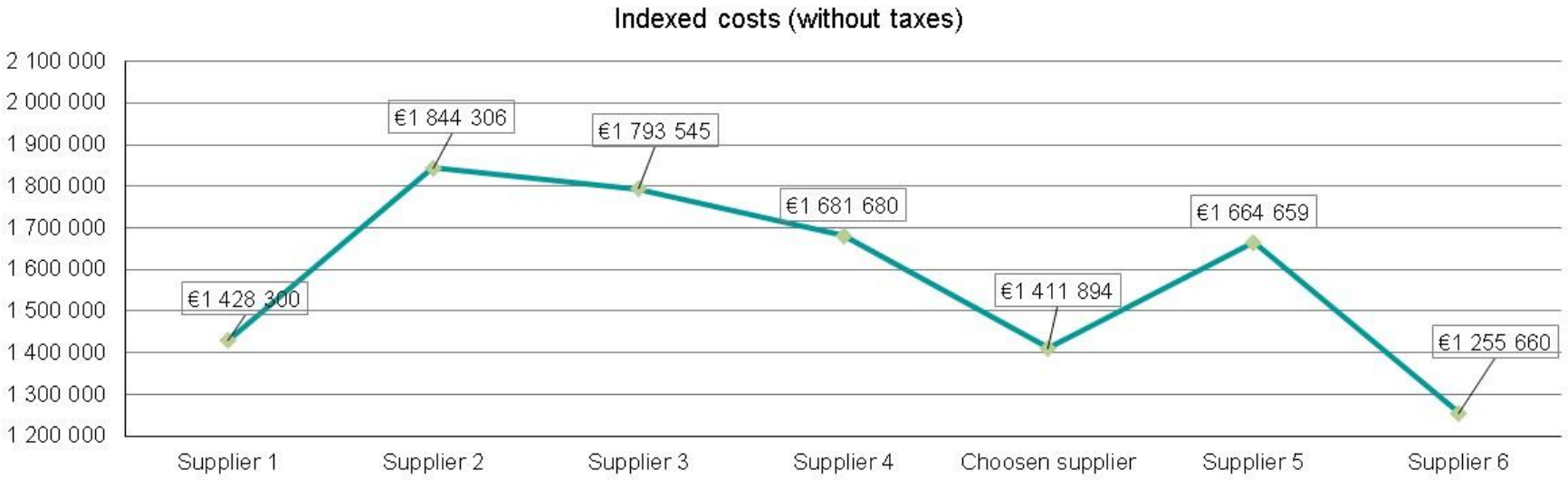
# CONDITIONS OBTAINED

- No residual value after contract duration:
  - When the contract ends* the company can keep the installation without any cost. Of course, the solar panels do need to have maintenance periodically. For this they can still rely on the supplier afterwards if they wish.
- Low indexation of 1,5% (fixed!)
  - Other parties: 2% or linked to the consumer index
- Dismantling cost = € 0
  - Second best offer: € 56.000, other parties: € 60.000 – € 70.000
- All-in guarantee for 15 years

*solar panel lifetime = 30 years

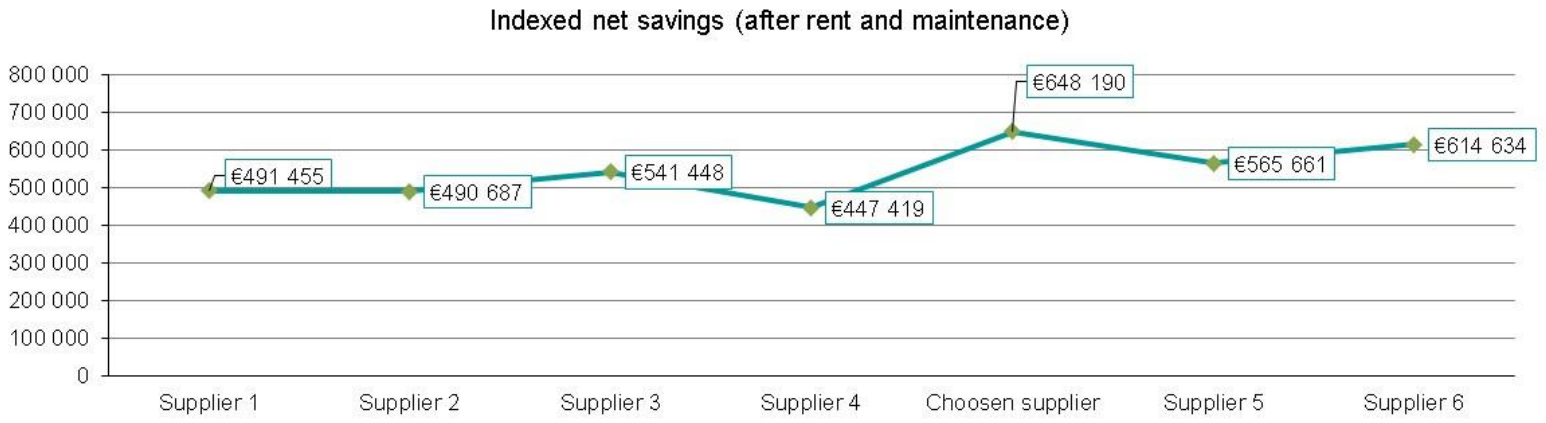
# COSTS

- 49 €/MWh which will be indexed by 1,5% yearly.
- As the profitability of solar panels decreased gradually, the average cost over 15 year is 54 €/MWh.



# SAVINGS OVER 15 YEAR

- (grid fees and taxes cost – solar energy cost) x MWh
- € 2 050 000 – € 1 400 000 = € 650 000 savings over a period of 15 years
- Projection of savings based on electricity prices increasing by 2% per year



# SUSTAINABILITY

- 15.000 tonne less carbon emissions on 30 year

# GERMANY

# COMPANY DESCRIPTION

- Company active in household products
- Yearly consumption of 9.000 MWh on the site where the solar project will be developed
- Nearly 3800 solar panels installed on the 60.000 m²
- Solar project will cover 17 to 18% of the yearly consumption
- Hedged electricity price for 2020: 175 €/MWh (budget all-in: commodity & non-commodity)

# TENDER PROCESS

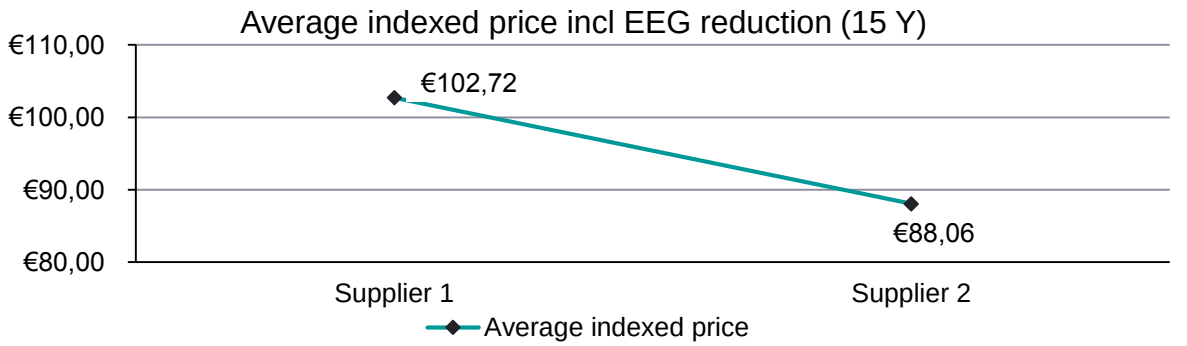
- Offers of 4 different suppliers, final round with 2
- 3 different rounds
- Initially, contract period of 15 years, finally 8 years due to better leasing conditions
- The goal was to utilize the max possible green ratio (% of current elec needs covered with own production) and have non-commodity reductions

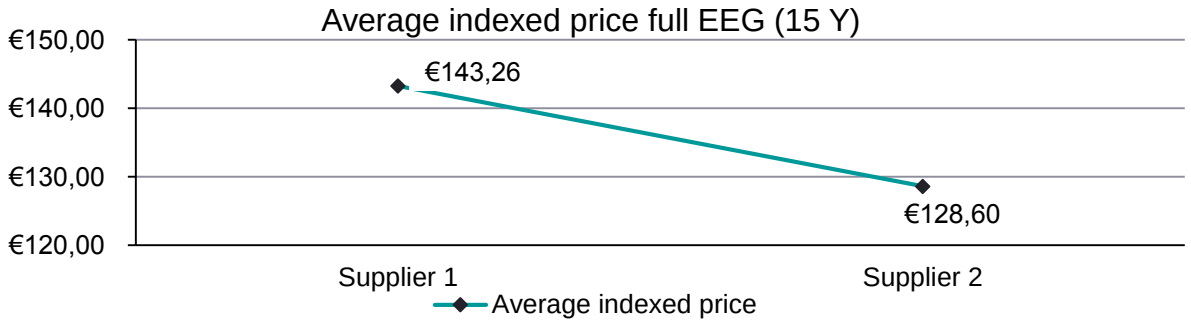
# CONDITIONS OBTAINED

- Residual value after contract duration:
  - When the contract ends the company can keep the installation for a payment of around 300k. In case of further maintenance the indicative cost would be around 79 €/MWh only.
- Indexation of 2%
  - This is applicable for the operational costs only, the rent is fixed
- All-in guarantee for 2 years, 25 years for extra linear power
- Contract concept to increase chance for EEG reduction:
  - To have benefit from a 60% EEG discount on the produced volumes, the client needs to be operator of the plant instead of the supplier. Therefore, energy suppliers can not guarantee a performance guarantee.

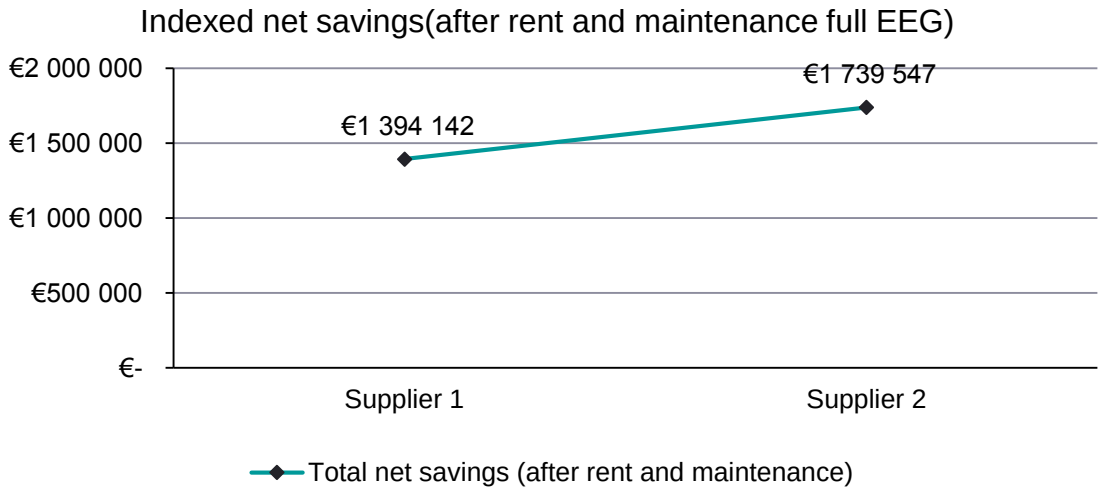
# COSTS

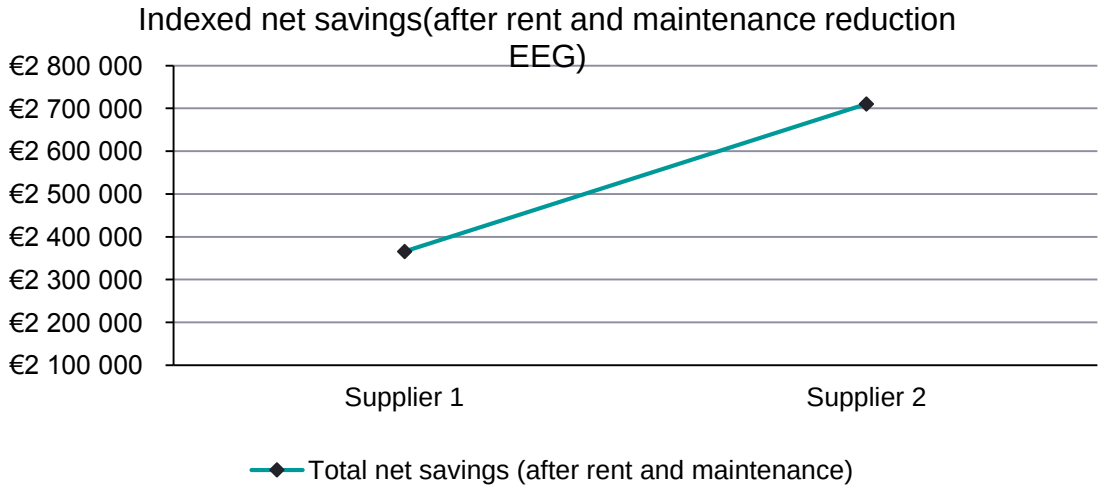
- Calculated average price over 15 years = 128,60 €/MWh.
- This includes the residual value (+/- 300k) of the solar panels after 8 years
- Takes into account profitability decrease.
- On the operational costs an index of around 2% is applied. Leasing fee is fixed.
- In the end you pay a predefined fixed amount per year. €/MWh in our example is for comparison purposes.
- In case solar panels are not bought after 8 years, average price is 132,76 €/MWh



# SAVINGS OVER 15 YEAR



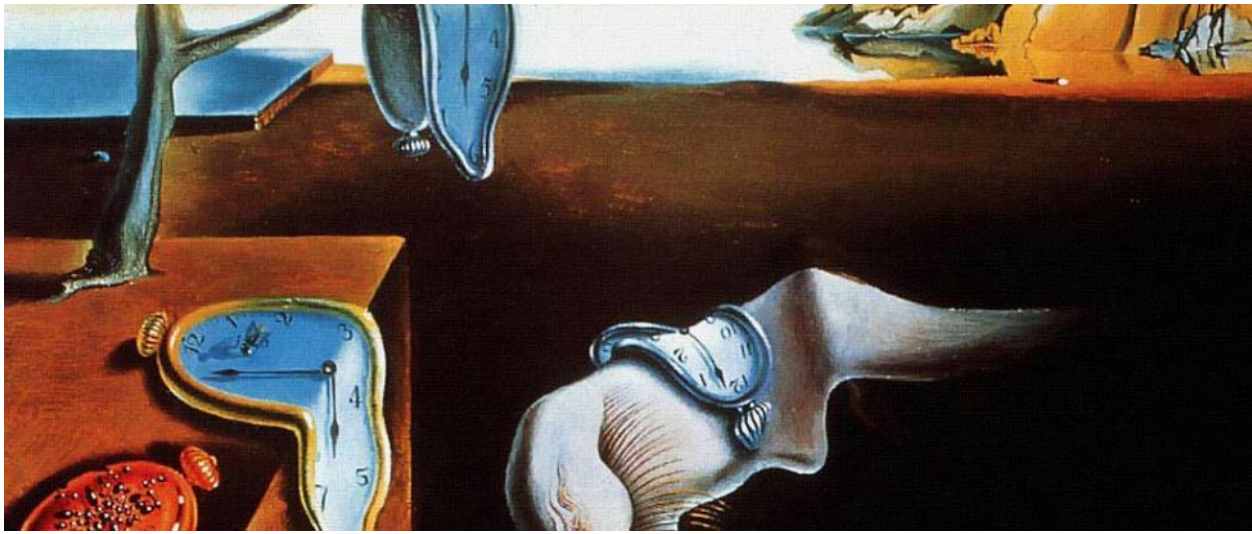




- (grid fees and taxes cost – solar energy cost) x MWh
- € 2 050 000 – € 1 400 000 = € 650 000 savings over a period of 15 years
- Projection of savings based on electricity prices increasing by 2% per year

# SUSTAINABILITY

- 3970 tonnes of CO2 less over a contract period of 8 years

# SPAIN



# COMPANY DESCRIPTION

- Company active in household products
- Yearly consumption of 19.000 MWh on the site where the solar project will be developed
- Nearly 7.500 solar panels on more than 17.000m²
- Solar production is estimated to be 3.300 MWh per year
- Hedged electricity price for 2019: 93,59 €/MWh (all-in: commodity & non-commodity)

# TENDER PROCESS

- Offers of 4 different suppliers
- 3 different rounds
- Contract period of 15 years because return on investment was better than on 10 years
- The goal was to utilize available surfaces as much as possible and achieve savings compared to the current price

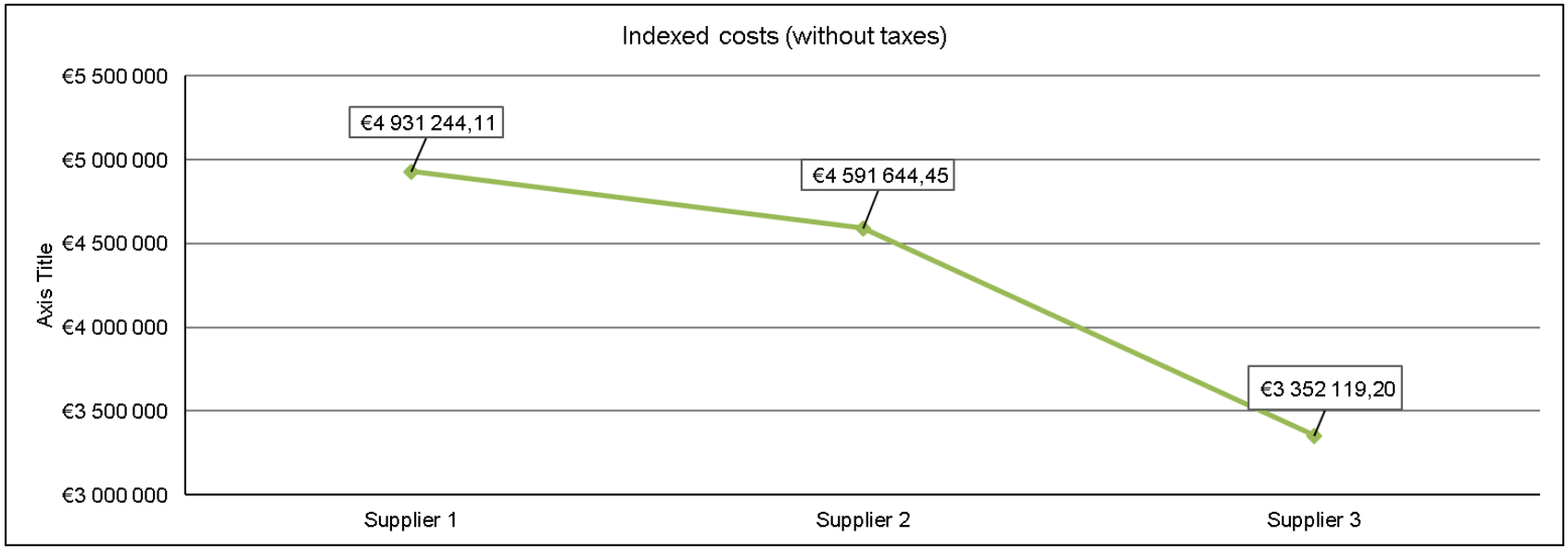
# CONDITIONS OBTAINED

- No residual value after contract duration:
  - When the contract ends* the company can keep the installation without any cost. Of course, the solar panels do need to have maintenance periodically. For this they can still rely on the supplier afterwards if they wish.
- Fixed and low indexation of 1,5% yearly
  - There were other proposals with 0% to 1% indexation that looked more attractive at first sight but after the analysis our conclusion was different.
- Panels yearly degradation of 0,5% as standard
  - One supplier was offering a 0,25% yearly degradation on solar panels
- Reinforcement needed
  - Supplier will cover the costs of any roof investment. The client can choose to take equal instalments through out next 10 years, or the cost can be incorporated in the price of electricity.
- All-in guarantee
  - 10 years for solar panels
  - 5 years for inverters

*solar panel lifetime = 30 years

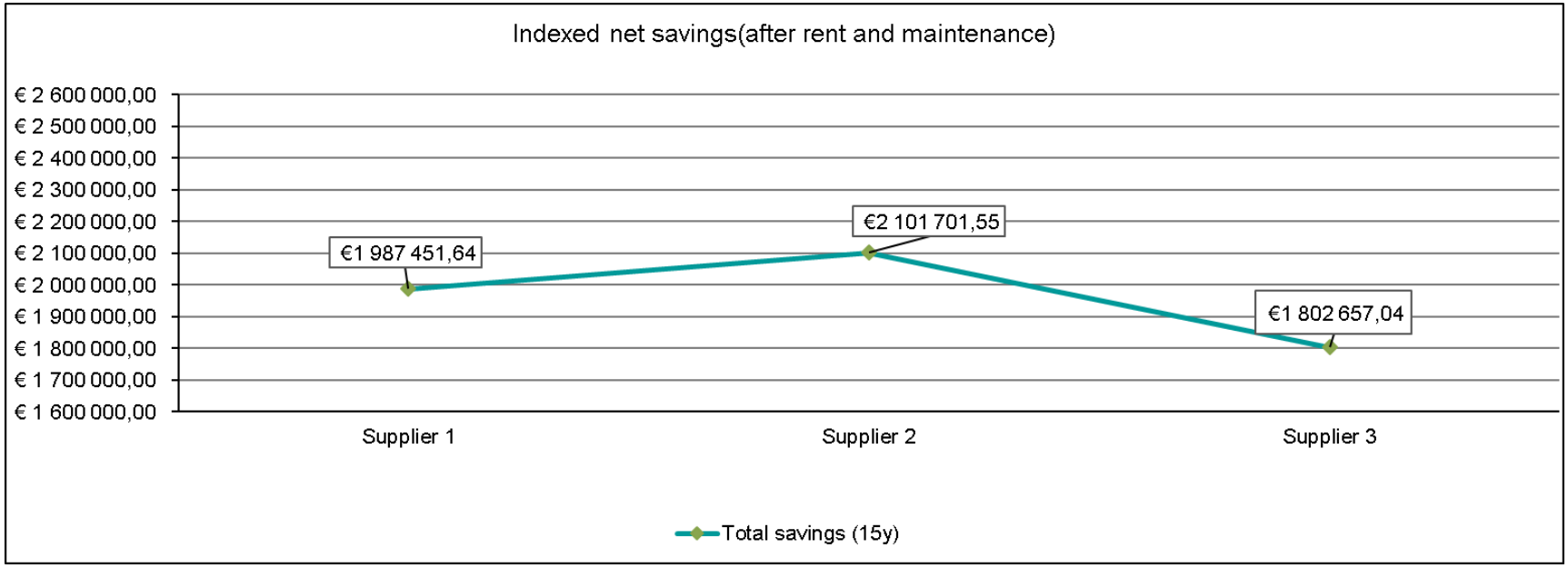
# COSTS

- 61 €/MWh indexed by 1,5% yearly.
- As the profitability of solar panels decreased gradually, the average cost over 15 year is 76,76 €/MWh.



# SAVINGS OVER 15 YEAR

- (all-in energy price – solar energy cost) x MWh
- Around 2 million € savings over a period of 15 years
- Projection of savings based on electricity prices increasing by 2% per year



# SAVINGS OVER 15 YEAR | PARTICULARITY SPANISH MARKET

Further savings are possible in grid fees and taxes

- **ATR variable:** Grid fee per MWh that client consumes from the grid.
  - Supplier 1 gave the client a bigger saving as they ensure a higher production through the solar panels = less consumption from the grid
- **ATR fixed:** Grid fee depending on MW/year contracted in the grid. If your peak hours are during solar production hours, you could reduce your contracted capacity and reduce your cost.
  - In this case the client could not reduce their contracted capacity.
- **Electricity tax:** A 5% tax applies to ATR variable and ATR fixed. By reducing this cost. Electricity tax total amount is reduced as well.

| Total Cost | Currently | Supplier 1 | Supplier 2 | Supplier 3 |
|---|---|---|---|---|
| **Reduction consumption grid** | 18 172 958 | 13 738 358 | 14 013 958 | 14 994 557 |
| ATR var € | 133 027 | 100 566 | 102 583 | 109 761 |
| ATR Fixed € | 324 806 | 324 806 | 324 806 | 324 806 |
| IEE € | 77 308 | 58 443 | 59 616 | 63 787 |
| Total | 457 834 | 425 372 | 427 390 | 434 568 |
| ATR var €/MWh | 7,32 | 5,53 | 5,64 | 6,04 |
| IEE €/MWh | 4,25 | 3,22 | 3,28 | 3,51 |
| **ATR Fixed €/MWh** | **17,87** | **17,87** | **17,87** | **17,87** |
| Total €/MWh | 25,19 | 23,41 | 23,52 | 23,91 |
| **Reduction ATR** | | **1,79** | **1,68** | **1,28** |
| **Reduction IEE** | | **1,04** | **0,97** | **0,74** |
| **Non-commodity surcharge** | | **15,05** | **15,22** | **15,85** |

# ITALY

# COMPANY DESCRIPTION

- Company active in household products
- Yearly consumption of 31.800 MWh on the site where the solar project is being developed on an a ground /carport area of around 65.000 m²
- Solar production is estimated to be 7.250 MWh per year
- Hedged electricity price for 2019: 107,55 €/MWh (all-in: commodity & non-commodity)

# TENDER PROCESS

- Offers of 5 different suppliers
- 3 negotiation rounds
- Contract period of 15 years
- The goal was to max the savings over a period of 25-30 years and have a stable cost over a certain % of consumption

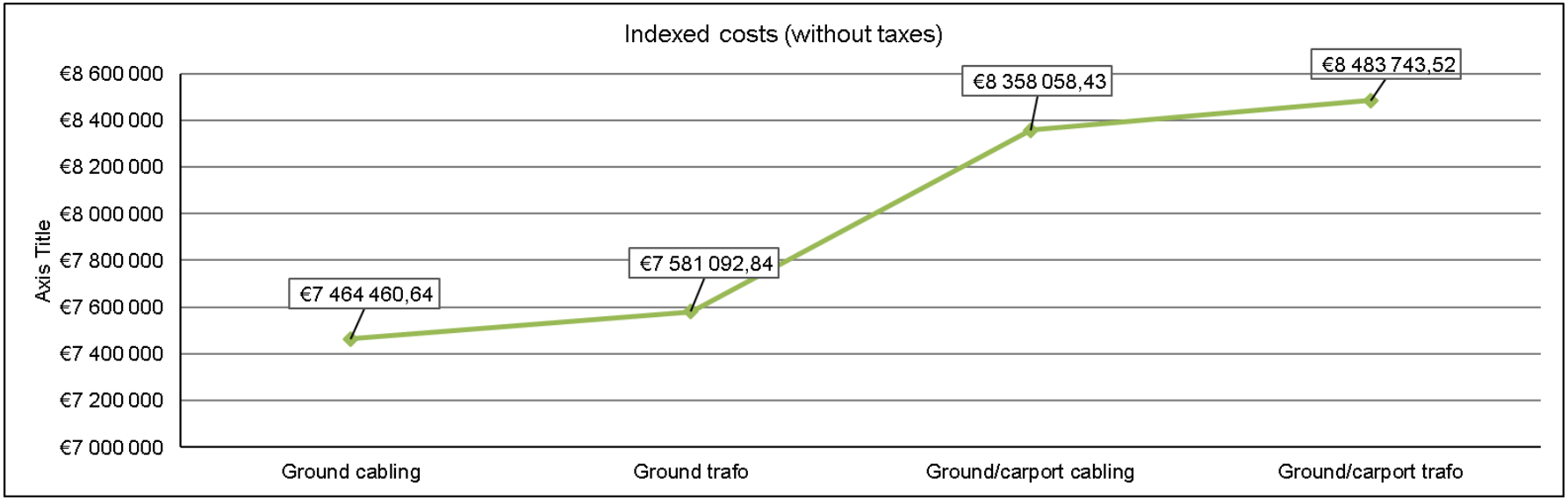
# CONDITIONS OBTAINED

- No residual value after contract duration:
  - When the contract ends* the company can keep the installation without any cost. Of course, the solar panels do need to have maintenance periodically. For this they can still rely on the supplier afterwards if they wish.
- Local consumption close to 100%
- 4 different options discussed in the final round (to reach the optimal conditions) :
  - Carport/ground with extra transformer followed by one cable to the site
  - Carport/ground with extra cabling to the site where the electricity can be converted with the existing transformer
  - Ground with extra transformer followed by one cable to the site
  - Ground with extra cabling to the site where the electricity can be converted with the existing transformer
- All-in guarantee
  - 10 years for solar panels
  - 5 years for inverters

*solar panel lifetime = 30 years

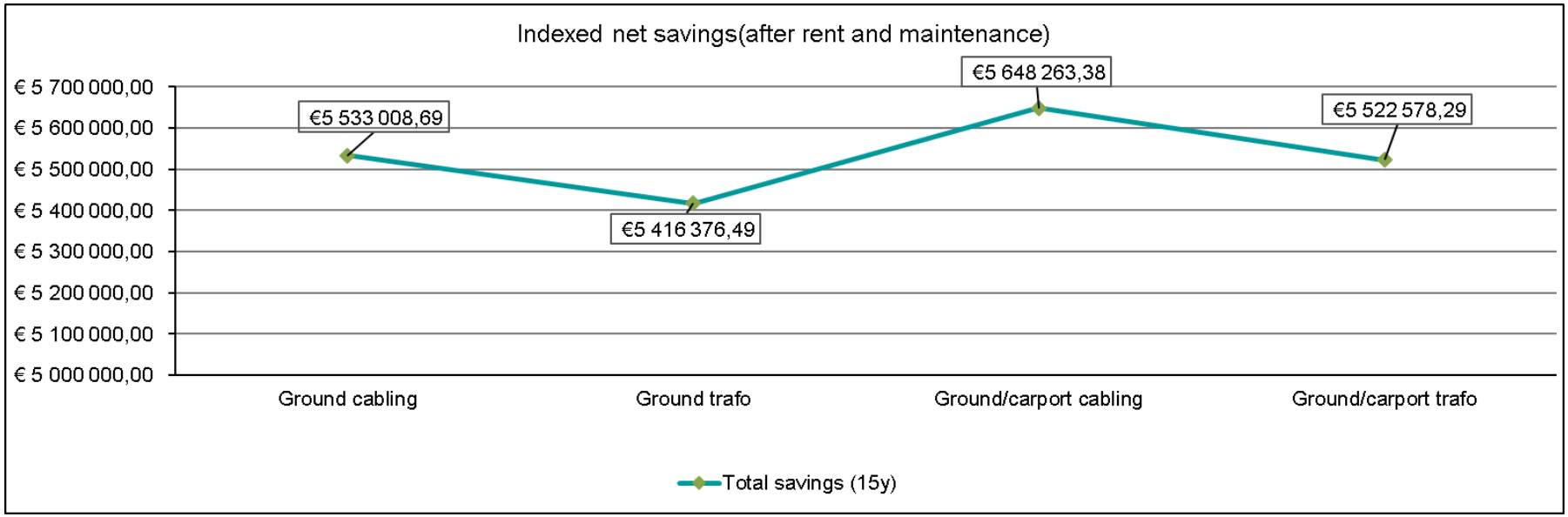
# COSTS

- 66,50 €/MWh indexed by 1,5% yearly.
- As the profitability of solar panels decreased gradually, the average cost over 15 year is 73,96 €/MWh.



# SAVINGS OVER 15 YEAR

- (all-in energy price – solar energy cost) x MWh
- Around 5 million € savings over a period of 15 years
- Projection of savings based on current electricity all-in prices increasing by 2% per year



# MORE INFORMATION?

- Contact your consultant to find out more about our sustainability services or have a look at our website: https://www.eecc.eu/sustainable-energy-management