

Energy and non-energy impacts of a DSM program

Program éco21, Geneva, Switzerland

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industriels de Genève

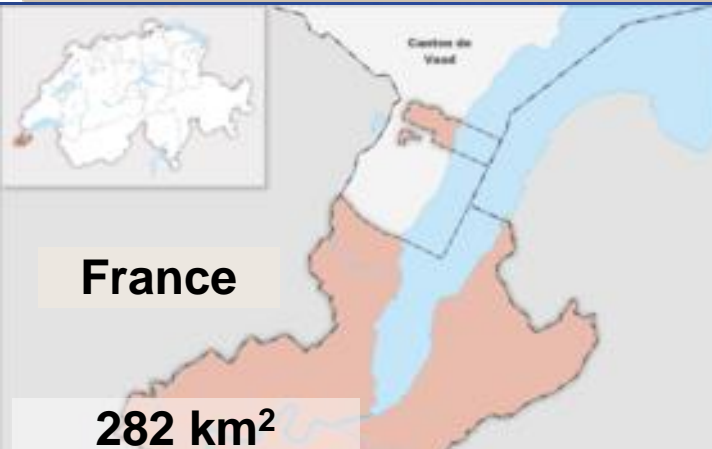
9th September 2014

Gilles Garazi

Head of Program éco21

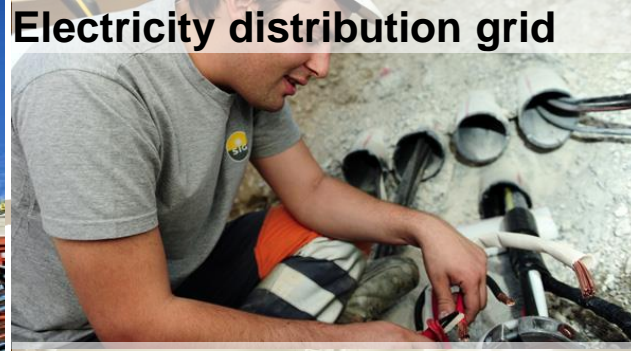


Geneva

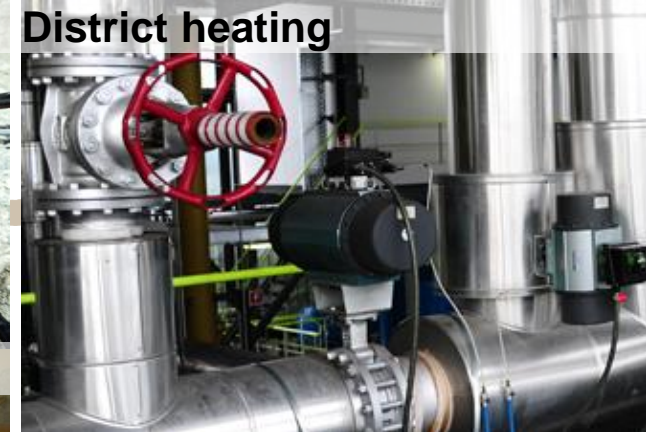




Services industriels de Geneve



Electricity distribution grid



District heating



Solar PV power plants



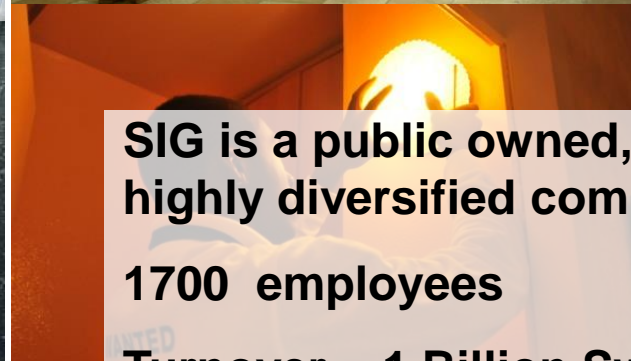
Demand-side management



Gas distribution grid



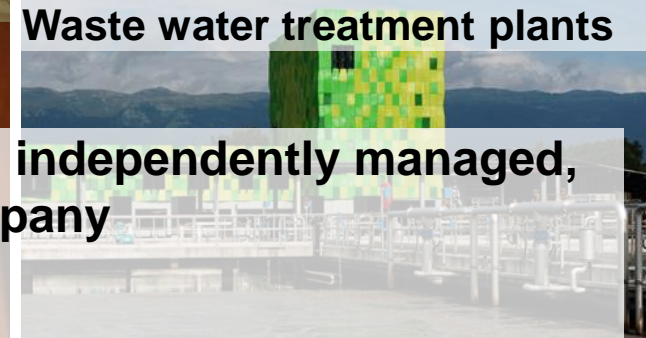
Dams, hydraulic power plants



SIG is a public owned, independently managed, highly diversified company

1700 employees

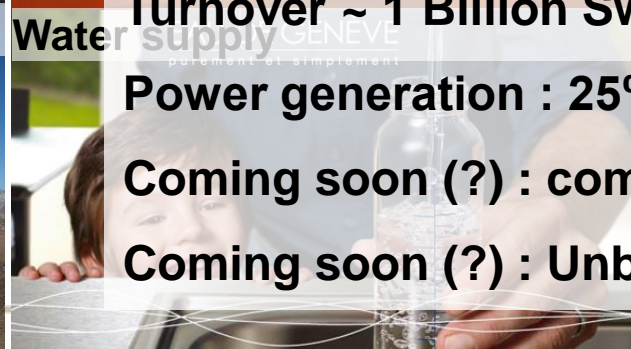
Turnover ~ 1 Billion Swiss francs



Waste water treatment plants



Windturbines



Water supply



Waste incineration plant

Power generation : 25% of Geneva's needs

Coming soon (?) : complete market liberalization

Coming soon (?) : Unbundling issue

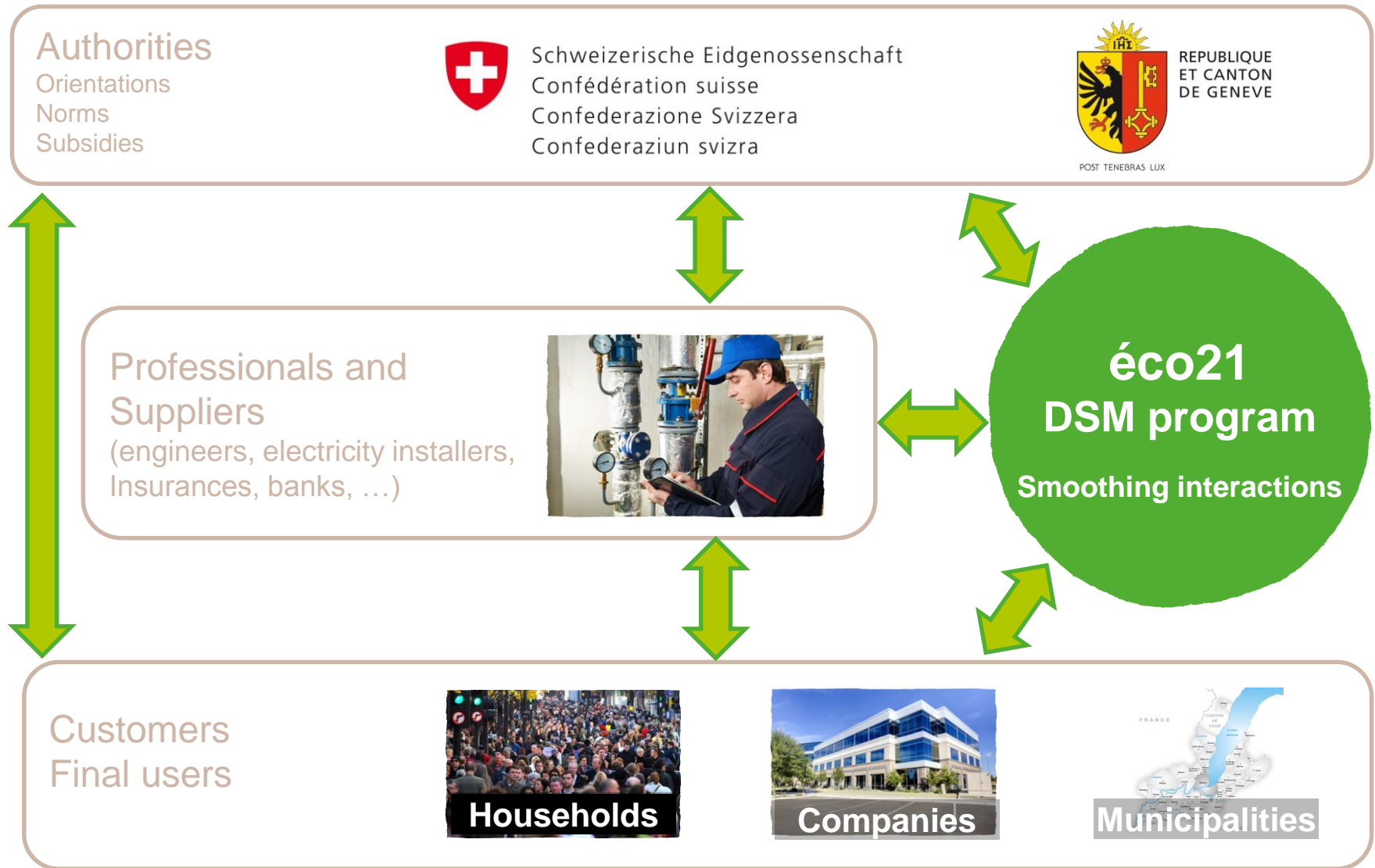
éco21 - history



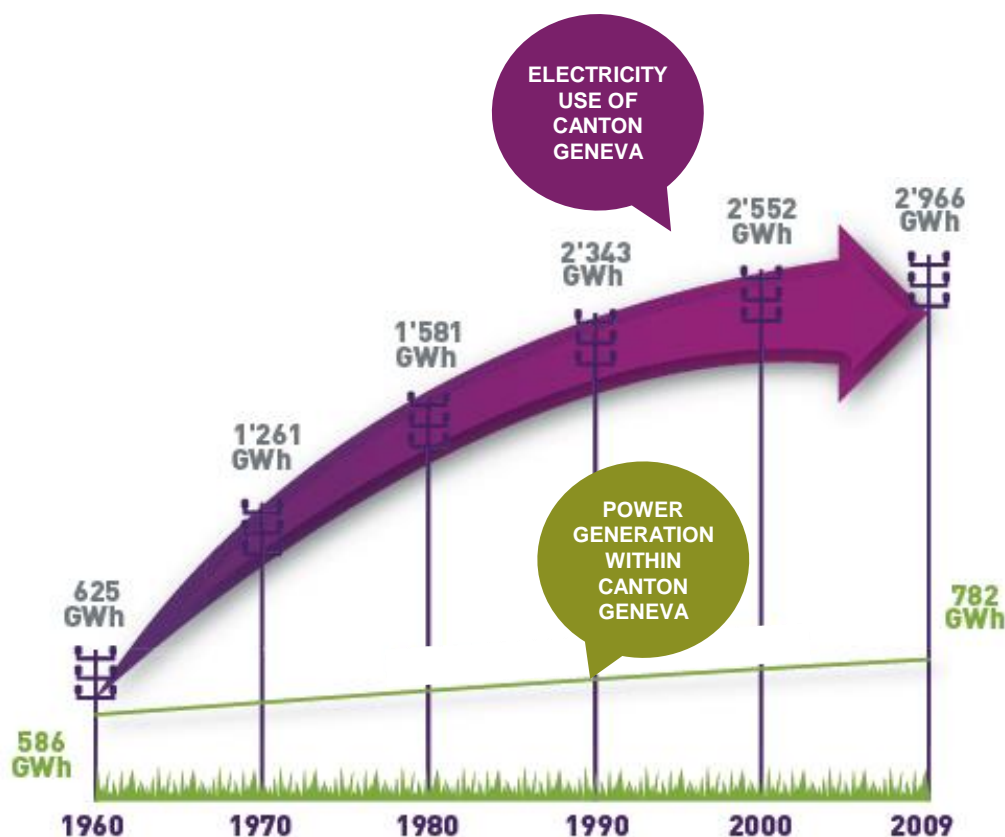
- 📅 In 2007, éco21 was launched by a political decision
A budget of 17.5 M€ had been given, as an alternative option to meet the regulator's requirement
- 📅 In 2009, SIG decided voluntarily to add 26.5 M€ in the program.
This decision followed a redefinition of the company strategy in the direction of energy transition
- 📅 Although this orientations were taken at a period when the market showed high energy prices, they have been kept later, when energy prices sank dramatically



Moving the whole system towards energy efficiency



éco21 – energy results



Overview of our results



At the end of march 2014 (5 years)
77'300'000 kWh per year.



It means :

- = **26'000** people
- = 4 x annual power generation of Seujet's HPP
- = 2,5% of total Canton Geneva's power use
- = **11'000'000 €/year** saved on power bills

Input

SIG

+

Clients

Projects



Output

Employment

Job
creation

Energy

77.3
GWh/y

Money saved

11 M€/y

Taxes

Incomes
for State

Other advantages

GE Swiss
EE-leader

Compe-
tition

Formation

↓
Energy
dependency

Cost per kWh saved

Comparable to market prices !

Between 0,033 and 0,042 €/kWh
depending on :

- Our programs features
- The assumed lifetime of our actions

« Stratégie énergétique 2050 » goals :

-3% cons./hab in 2020 (2000)

-9% cons. /hab in 2035 (2000)

Thanks to **éco21**, Geneva could
reach:

-7% in 2020 and

-13% in 2035

Households

Opérations éco-sociales

Direct install low-income

3 GWh/y saved since 2009



Activéco

App and tips

19 GWh/y saved since 2009

Chaleur renouvelable

Renewable heating solutions

5 ktCO2 saved since 2012

Distributeurs efficaces

Market trans

0.2 GWh/y saved since 2013

Small and medium sized companies

Optiwatt

Incentives and support energy saving

1.2 GWh/y saved since 2011



Eclairage Performant

Direct install in lighting for small and medium companies

Large consumers

Ambition Négawatt

Energy management for large companies

22 GWh/y saved since 2011



Real estate

Communs immeubles

Lighting solutions in common parts of buildings

24 GWh/y saved since 2011



Chaleur renouvelable

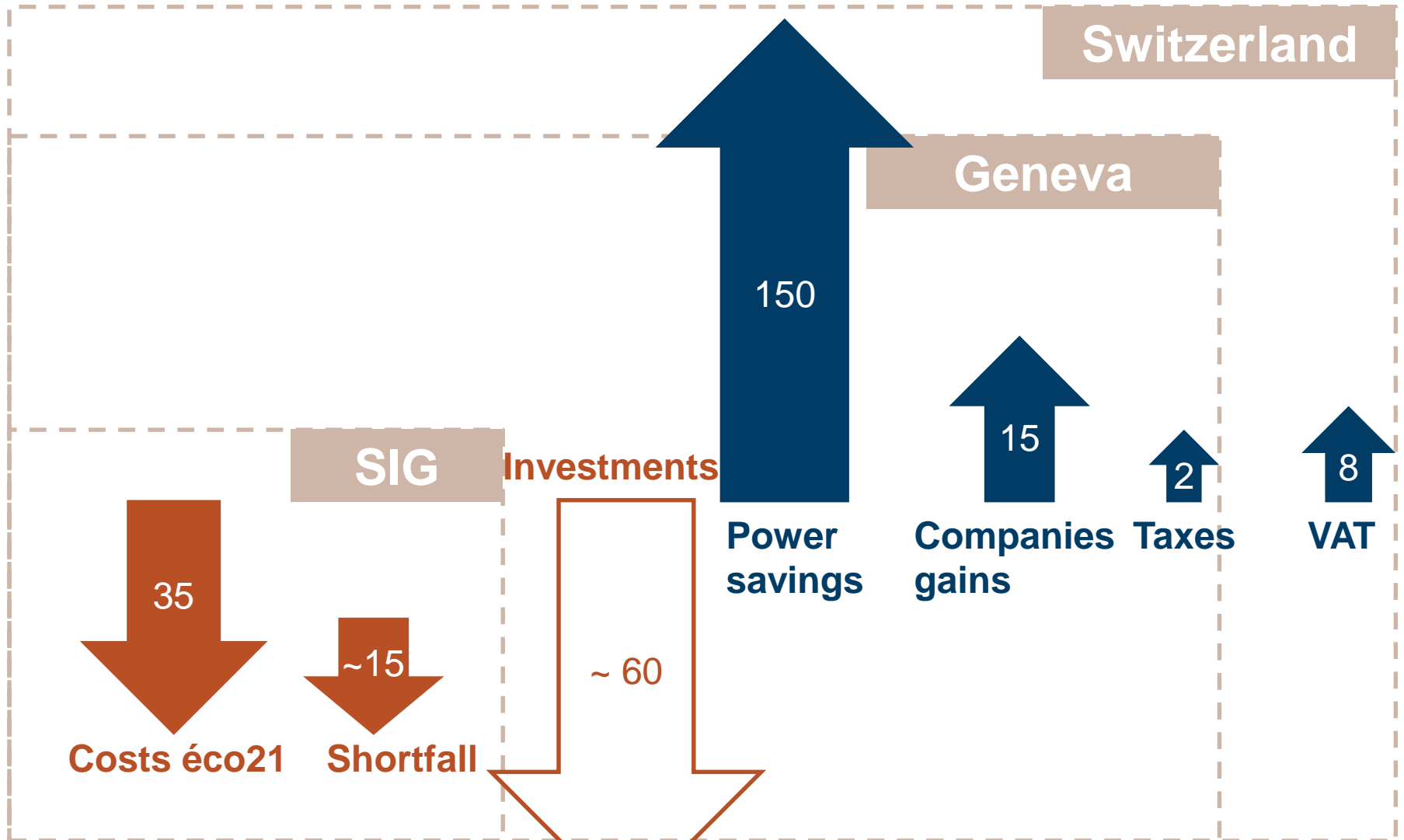
Renewable heating solutions

Optimisation

Energy performance contracts in existing boiler

3 ktCO2 saved since 2014

Costs and benefits 2007-13 – values in M€



« *We sell energy. Why on earth would we encourage our customers to save it ?!* »

« A DSM program could help us develop commercial energy services »

« **With us, you will possibly not have the lowest tariff, but you will pay less because you will use less energy** »

« **Hi, I was wondering what we could offer this customer to keep him, so I thought about your stuff, you know, éco-something...** »

« We are proud to be the first utility to operate a DSM program in Switzerland... and it works ! »

Conclusions (1/2)

Perception keys into SIG



The attitude towards éco21 largely depends on one's perception of the company :

- ✉ Employees who see SIG as an independent company in a liberalized world criticize éco21 : it should not be free, and it should be limited to our customers
- ✉ Employees who see SIG as a public utility consider that SIG is implementing the energy strategy of Geneva's authorities and find it logical, as any company has to create value for its shareholders

Those two visions now cohabit in SIG and are linked to our history.

But... the debate is now oriented on “how should we do éco21”. The existence of the program is not questioned anymore. Why ?

- ✉ Even the most market-oriented challengers can now see the positive effect of éco21 on customers satisfaction
- ✉ Our shareholders are politicians and éco21 creates jobs, allows companies to invest, to increase their turnover, to decrease their energy costs.

Conclusions (2/2)



Evolutions and perspectives for éco21

Evolutions from 2007 :

- 📌 Increasing importance of non-financial support : formation, information, tools
- 📌 Understanding of non-financial barriers : general barriers as resistance to change for both customers and actors, need for confidence in new technologies or actions
- 📌 Understanding of our role : using our notoriety, our image to give confidence to both customers and actors
- 📌 Our programs are and will be more structured with more non-financial support
- 📌 We are developing networks with both customers, intermediates and professionals actors. Our vision is to create jobs outside of SIG and note within SIG

External issues that will guide our evolutions :

- 📌 SIG's main issues : market liberalization, unbundling, SIG economic performances
- 📌 Federal laws evolutions : white certificates system or not
- 📌 Relationships between SIG and its shareholders : new missions such as EE officially given to SIG or not

A nighttime photograph of the Jet d'Eau fountain in Geneva, Switzerland. The fountain is illuminated and stands prominently in the center, with its water spray reaching high into the dark sky. The city lights of Geneva are visible in the background, reflecting on the calm water of Lake Geneva. The mountains behind the city are silhouetted against the twilight sky.

THANK YOU !

www.eco21.ch

Impact du programme éco21

Comparaison de l'évolution de la consommation électrique en Suisse et à Genève de 2005 à 2013



éco21 vous aide à réduire vos consommations d'énergies et émissions de CO₂, sans sacrifier ni confort ni compétitivité.

