



Schweizerische Eidgenossenschaft  
Confédération suisse  
Confederazione Svizzera  
Confederaziun svizra

**Bundesamt für Energie BFE**  
**Office fédéral de l'énergie OFEN**  
**Ufficio federale dell'energia UFE**  
**Swiss Federal Office of Energy SFOE**

## Feed-in tariff in Switzerland



Regula Petersen, Swiss Federal Office of Energy (SFOE)

6th Workshop International Feed-in Cooperation - 3rd November 2008 Brussels



# Swiss Federal Electricity Supply Act dated 23 March 2007

*Vorlage der Redaktionskommission für die Schlussabstimmung*

## **Bundesgesetz über die Stromversorgung (Stromversorgungsgesetz, StromVG)**

vom 23. März 2007

*Die Bundesversammlung der Schweizerischen Eidgenossenschaft,  
gestützt auf die Artikel 89, 91 Absatz 1, 96 und 97 A  
nach Einsicht in die Botschaft des Bundesrates vom 3. März 2007,  
beschliesst:*

### **1. Kapitel: Allgemeine Bestimmungen**

**Art. 1** Zweck

<sup>1</sup> Dieses Gesetz bezweckt, die Voraussetzungen für die Elektrizitätsversorgung sowie für einen Wettbewerb zu schaffen.

*Projet de la Commission de rédaction pour le vote final*

## **Loi sur l'approvisionnement en électricité (LApEl)**

du 23 mars 2007

*L'Assemblée fédérale de la Confédération suisse,  
vu les art. 89, 91, al. 1, 96 et 97, al. 1, de la Constitution<sup>1</sup>,  
vu le message du Conseil fédéral du 3 décembre 2004<sup>2</sup>,  
arrête:*

### **Chapitre 1 Dispositions générales**

**Art. 1** Buts

<sup>1</sup> La présente loi a pour objectif de créer les conditions propres à assurer un approvi-



## Objectives, players

### Objectives

- Overall target: + 5,400 GWh
- Hydropower target: + 2,000 GWh
- Efficiency target: household consumption keep “2000-level” by 2030

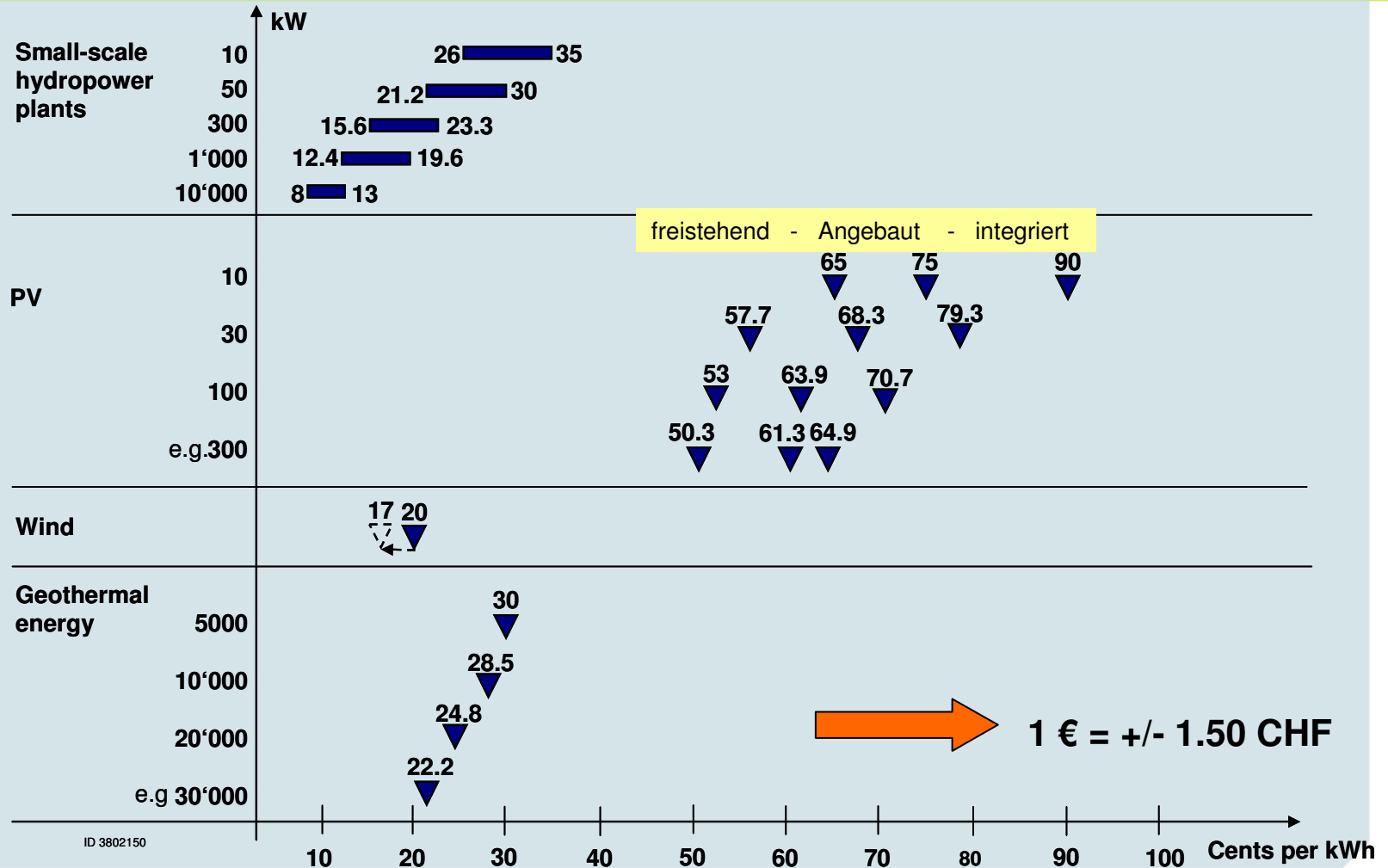
### Players

- SFOE (strategic management, state responsibilities)
- National TSO swissgrid (operation on behalf of SFOE)
- ElCom (monitoring of El. Supply Act, regulatory body)
- Producers
- Transmission system operators
- Traders
- Suppliers
- Consulting commission



# Tariffs

HS1



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## Diapositiva 4

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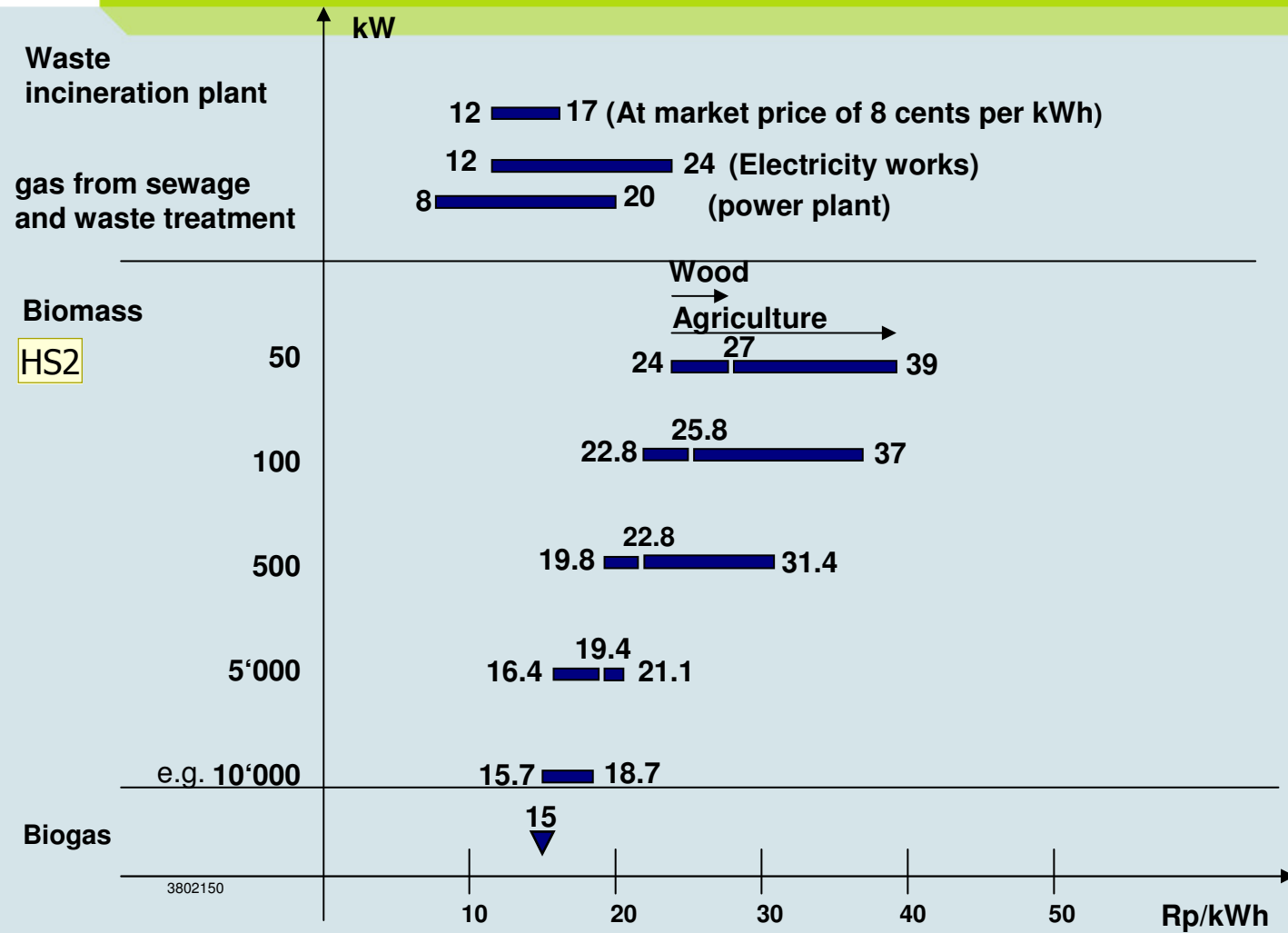
**HS1**

Die Grafik existiert auch als Version "nicht anteilmässig" und ist zu finden unter 3802150

Hulliger Sandra; 03/04/2008



## Tariffs



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## Diapositiva 5

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**HS2**

Die Grafik existiert auch als Version "nicht anteilmässig" und ist zu finden unter 3802150

Hulliger Sandra; 03/04/2008



## Timetable – Feed-in tariff

- facilities online after 1 January 2006 count as new installations
- registration of facilities starting 1 May 2008
- payments starting 1 January 2009
- no retroactive payments



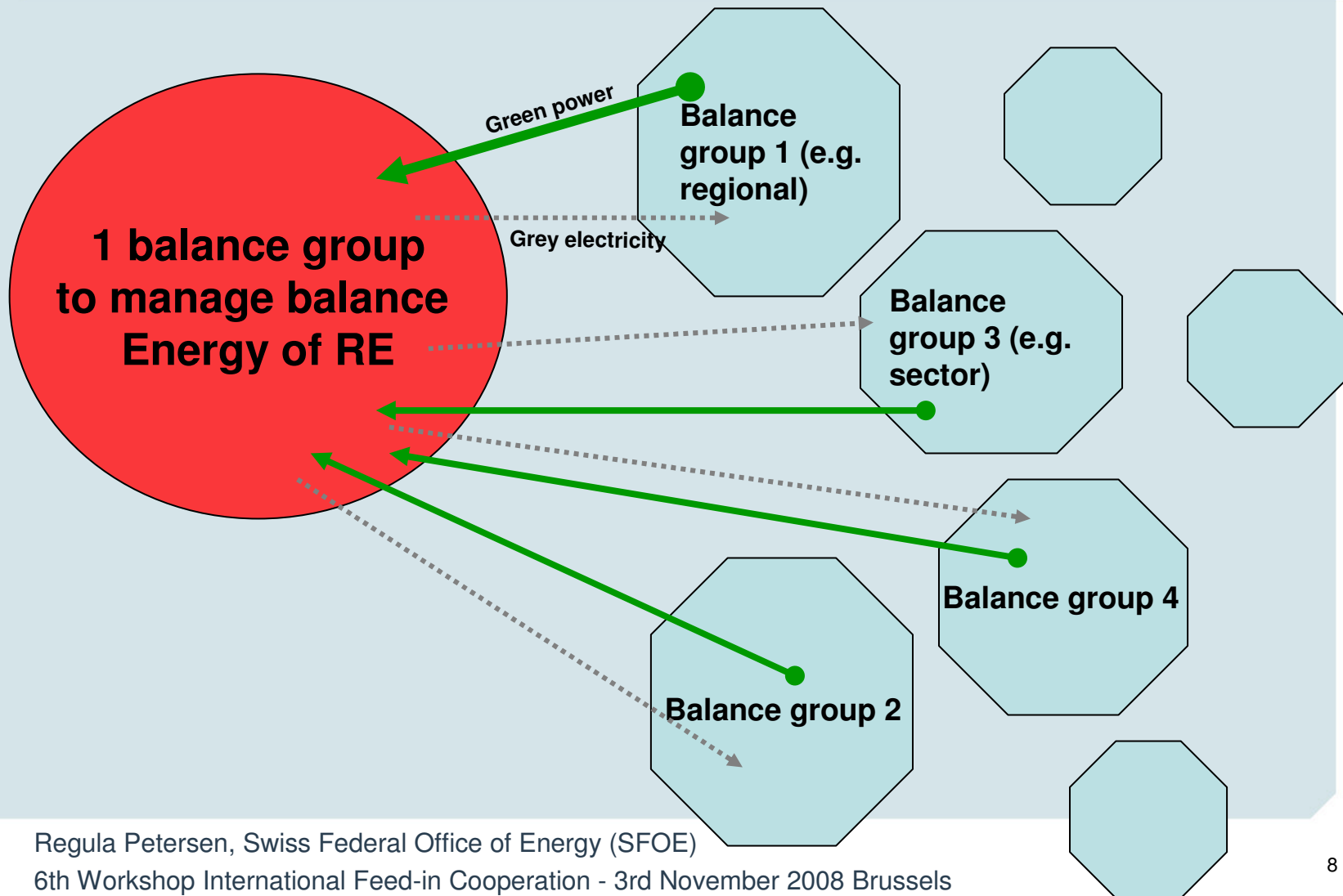


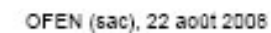
## Allocation of additional costs and financing

- Periodical payment of producers
- Additional costs = reference price – market price
- Market price is calculated from spot and trade prices (swissix, see [eex.com](http://eex.com), adjusted periodically)
- TSOs to be unburdened in billing system
- Fund is periodically stocked up with surcharges up to maximum of 0.6 cents per kWh end consumption. Surcharge is collected from TSOs' end consumers on basis of report system (demand-based). SFOE specifies surcharge based on reports from national TSO swissgrid.
- Frequency of pay-out and accumulation of funds should be the same



## Balance management group for renewable energy







## Balance group for renewable energy

### **SYSTEM**

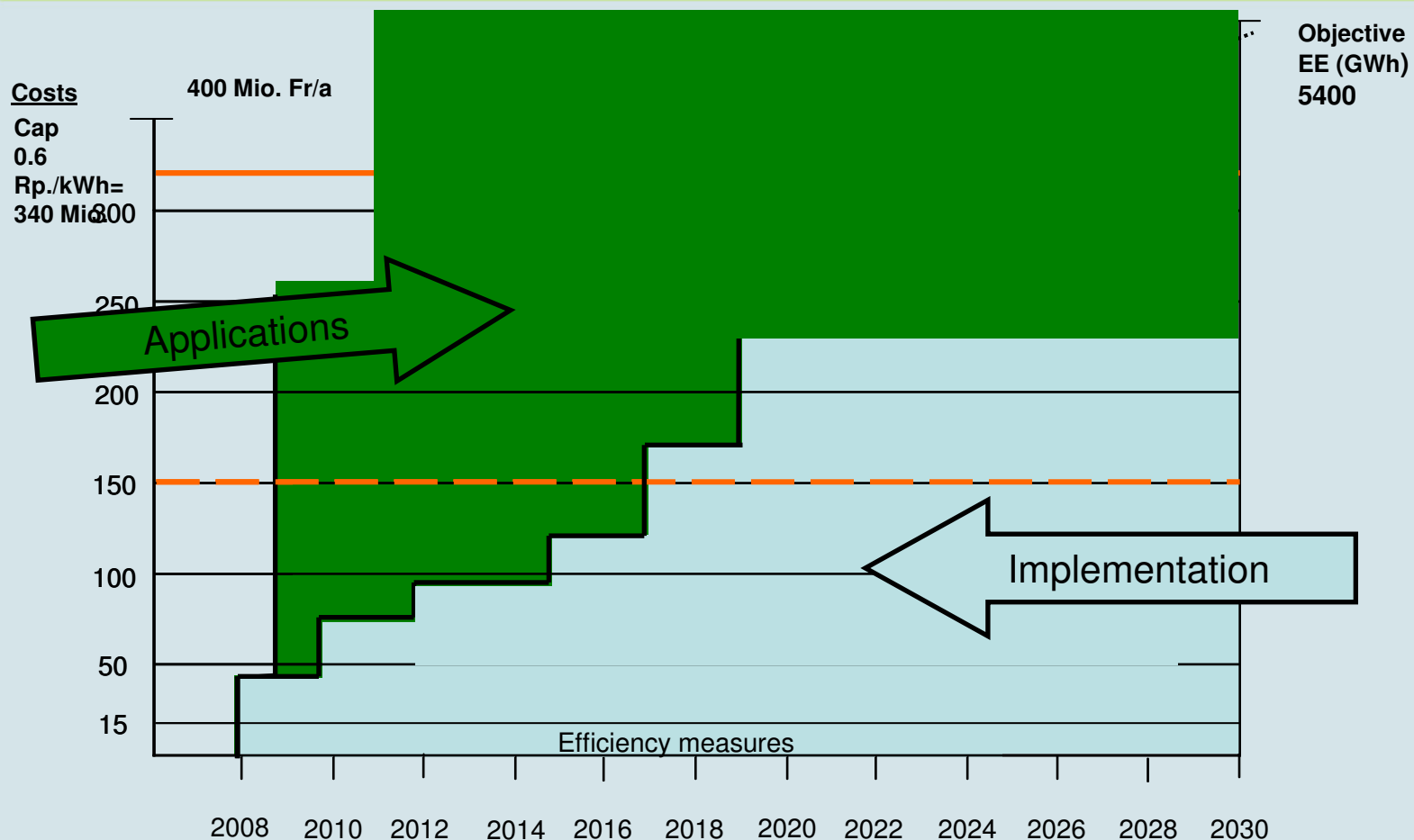
- Entire renewable energy production as per Article 7a in RE balance group
- Certificates of origin
- electricity allocated proportionally to balance groups
- RE Balance group is responsible for regulated energy

### **BENEFITS**

- All forms of RE covered by one single balance group
- RE balance group creates uniformity throughout Switzerland (schedules, balanced energy)
- RE balance group assures complete billing (allocation of additional costs)
- RE balance group eases burden on TSOs



## Managing the Feed-in Cap (by law at max. 0.6 cents/kWh)



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## Cap management

### **Requirements / criteria:**

- Investment security
- Adherence to specified caps in the law

### **multi stage procedure:**

1. Registration with national TSO, with consent of owner of land/building  
→ Notification issued by swissgrid, next steps required within x months
2. Progress note: building permit and consent of TSO for connection to grid)  
→ operation required within x months
3. start of operation → tariff specification by TSO, facility approved for certificates of origin, contract with RE balance group...

**goal:** → Transparency & Quality, avoid “ghost” projects



## Application Procedure

### Basic Principles

- „first in – first served“
- If cap is reached: same day → largest projects first; rest wait-listed

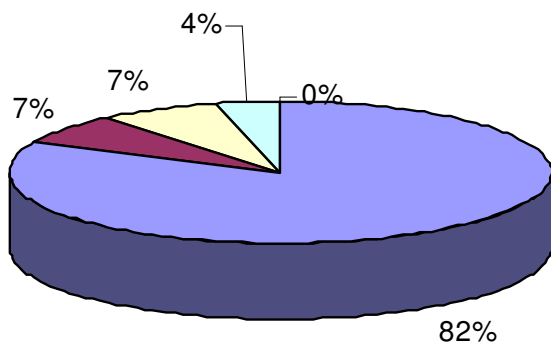
### Application

- As from 1 May with TSO (swissgrid)
- swissgrid checks applications and fund availability (within cap)
- swissgrid notifies project promoter
- Project's feed-in allocation is „reserved“ during pre-determined realisation period
- In case project fails to materialise within deadlines, feed-in allocation is freed for other project



## Registration process – first results

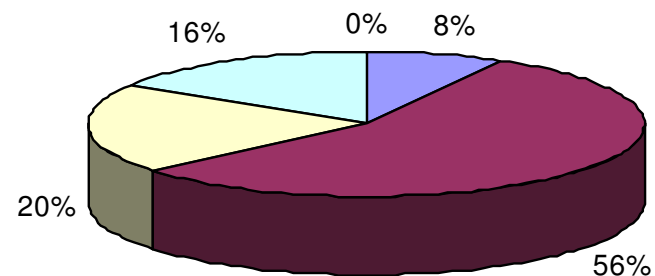
numbers of registered facilities



PV Wind Hydro Biomass Geothermal

More than 5'000 facilities registered

registered capacity of all registered facilities



PV Wind Hydro Biomass Geothermal

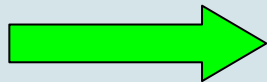
Facilities with production of ~ 3 TWh registered → 1/2 of „2030 goal“





Max. caps

Technology	%
PV	5 (up to 30)
Wind energy	30
Geothermal	30
Biomass	30
Hydropower	50



Temporary moratorium declared on further PV applications



**Thank you for your attention**

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## Labelling, certificate of origin, marketing of green power

- Labelling as before
- Certificates of origin now compulsory → transparency of system
- Ecological added value after feed-in cannot be allocated via Article 7a. The certificates of origin for “7a production” are kept back at swissgrid in order to avoid double counting.
- Ecological added value as per Article 7b (green power market) can be attained and marketed (to end users or in form of certificates). Certificates of origin are compulsory.
- Switching between 7a and 7b is possible on annual basis



## Previous “15-cent” deal and general principles governing feed into grid (old and new Article 7)

- Volume guarantee as per existing agreements in accordance with Article 28a (up to 2025 / 2035 for hydropower)
- Integration into new system:  
Facilities online after 1 January 2006;  
renovation/upgrading ( $\geq 50\%$  investment of a new facility  
or  $\geq 5$  production increase \*)
- Importance for existing facilities with renewable energy (waste combustion plants)
- Market price: previously: avoided costs; now: weighted exchange prices (swissix see [eex.com](http://eex.com))