
How to Create a Good Regulation in Favour of Renewable Energies in the Heating Market?

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IEA Renewable Energy Working Party
Technology and Policy Seminar
“Renewable heating and cooling - from RD&D to deployment”
5. April 2006

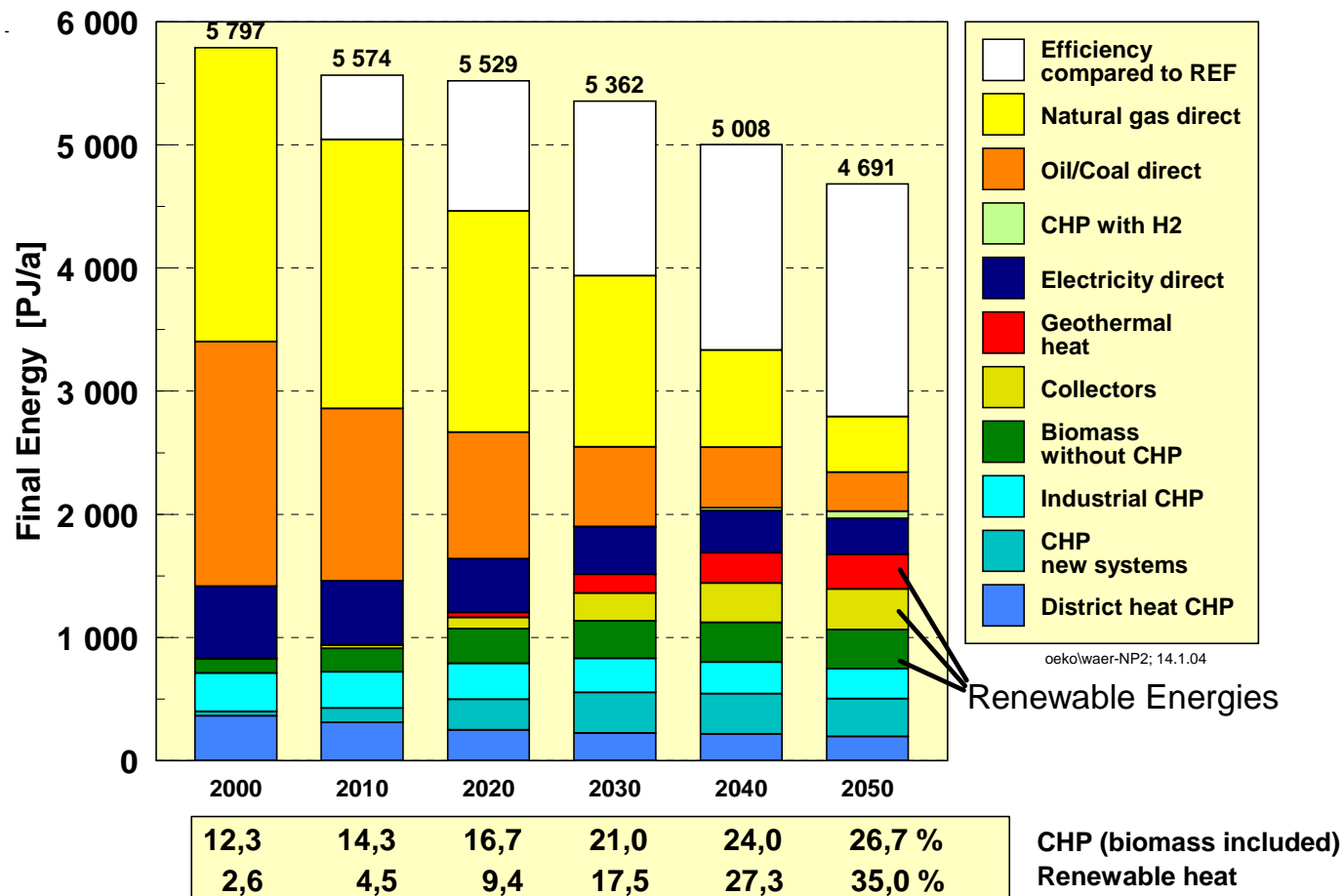


Prof. Dr. jur.
Stefan Klinski (FHW Berlin)

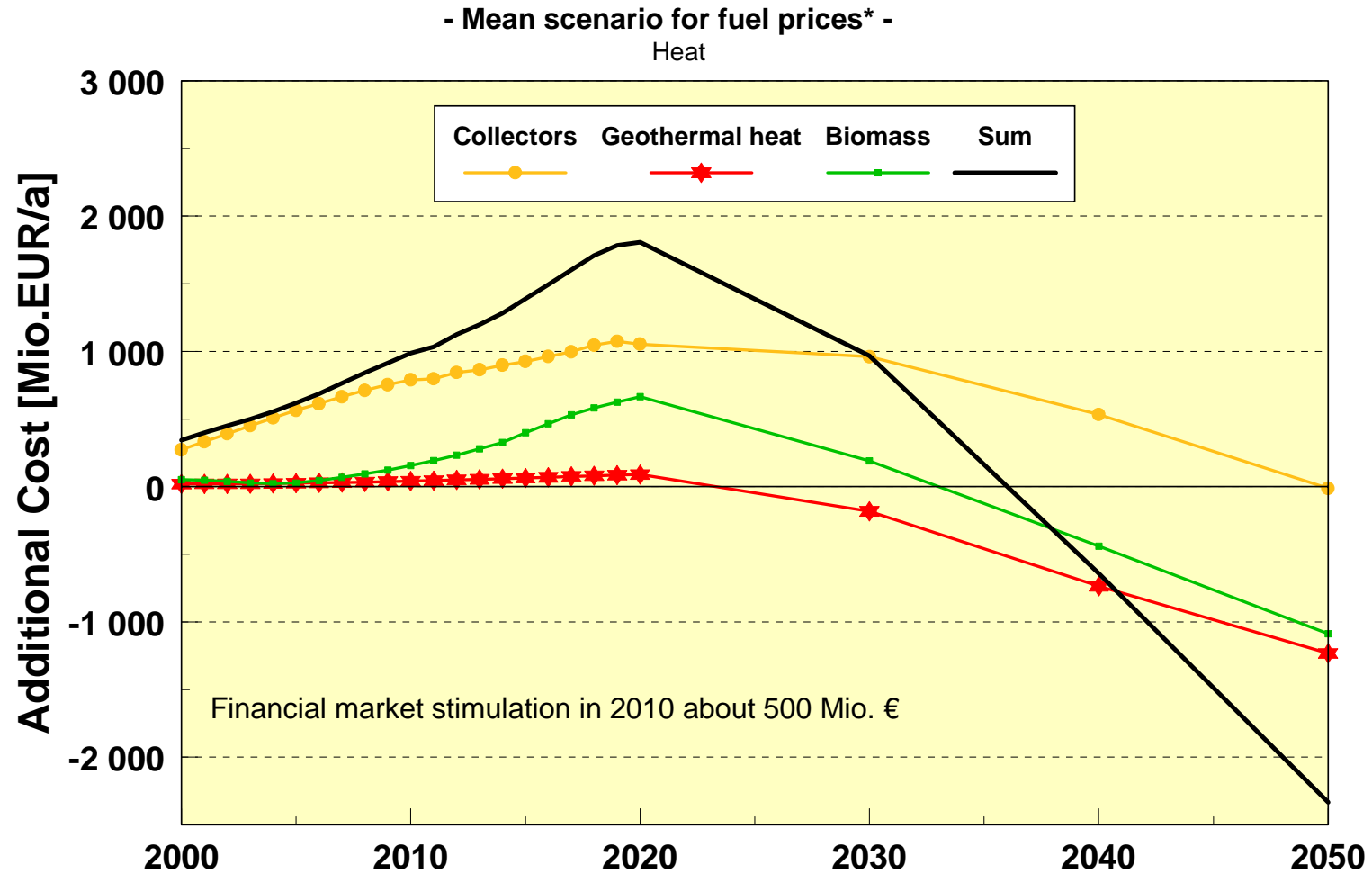
Gert Apfelstedt

Scenario for the German Heat Market

- Szenario NaturschutzPlus II -



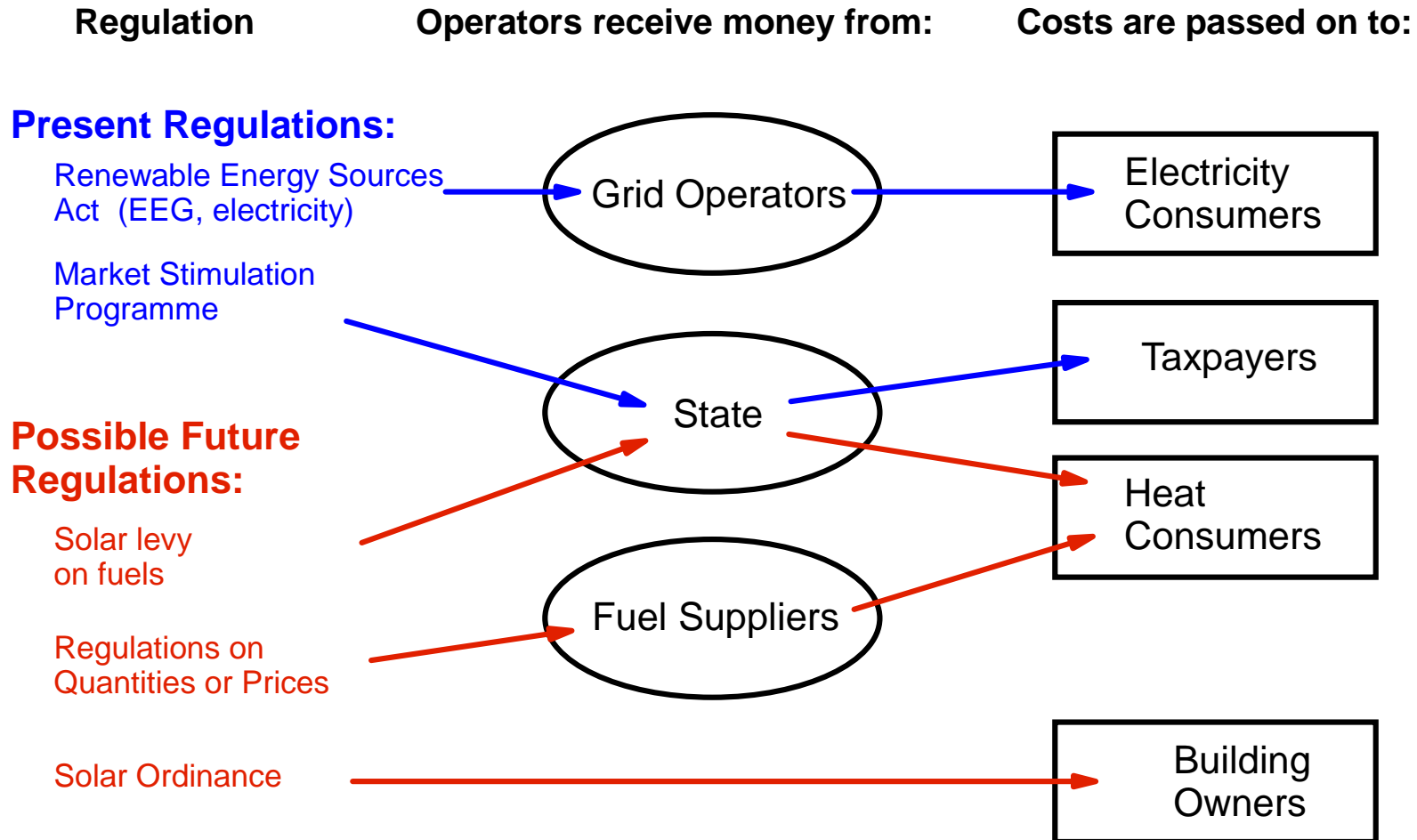
Additional Cost for Renewable Heat in Germany



* Price for heating oil increasing from 33 ct/l (year 2000) to 63 ct/l (2050), VAT included

DifTec-M.pre

Who pays?



Endzahlr.pre

Requirements on a new Regulation

- Achievement of short term goals (till about 2010)
- Setting of the course for long term goals (considering all renewable technologies, construction of small district heating systems)
- Cost efficiency (minimising wind fall profits and transaction costs, promoting competition)
- Polluters should be charged
- Independence of public budget
- Political enforceability
- Legal conformity

Three Regulations

Three main regulations will be discussed:

a.) Ordinance

b.) Quantity regulation (Quota)

c.) Price regulation

a.) Ordinance

Principle

- Each owner of a building has to use renewable energy to meet 10% of his heating demand. The obligation becomes effective when the boiler is replaced.

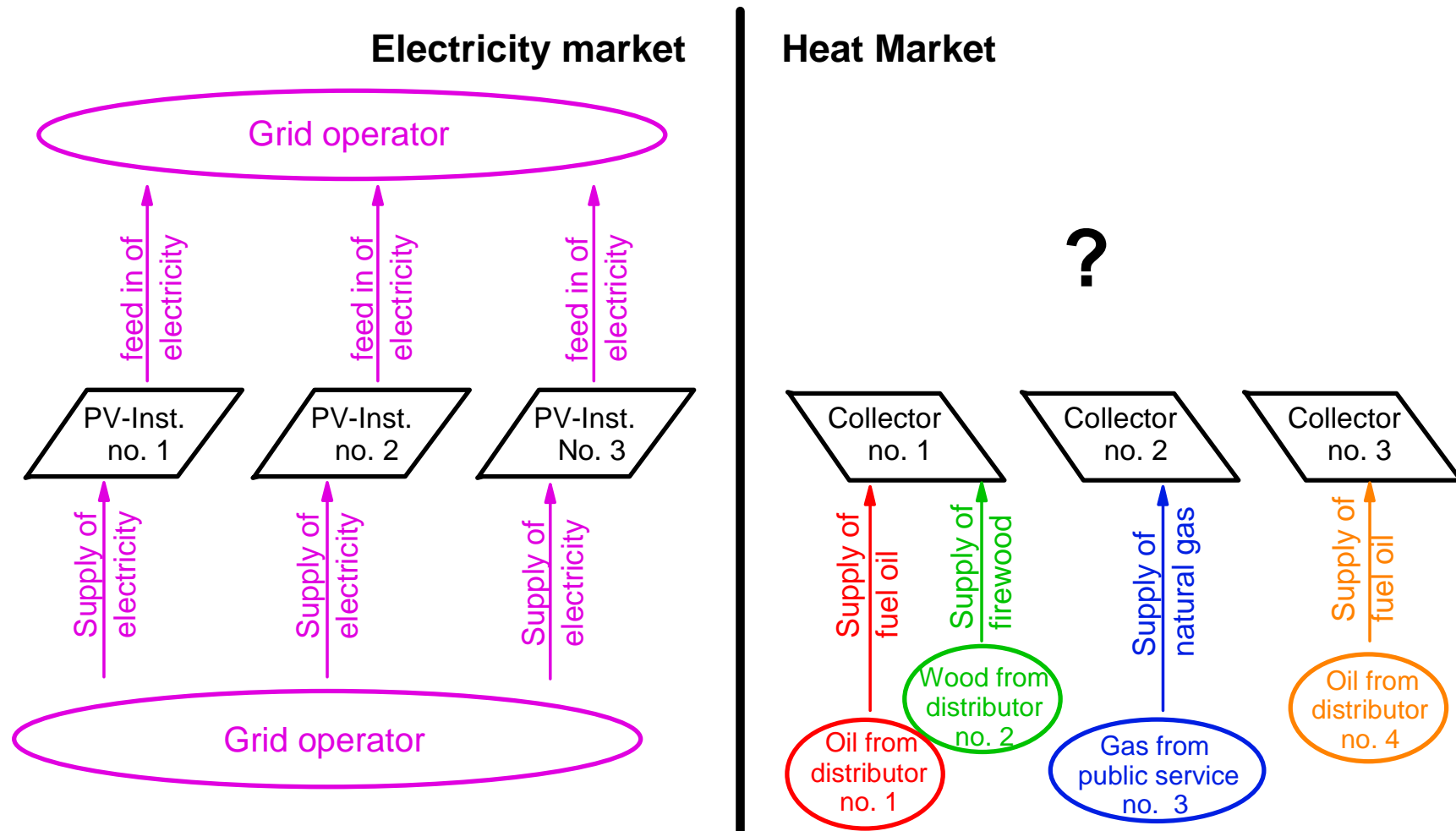
Advantages

- easy to understand
- Similar regulations do already exist (Israel, Barcelona).

Problems

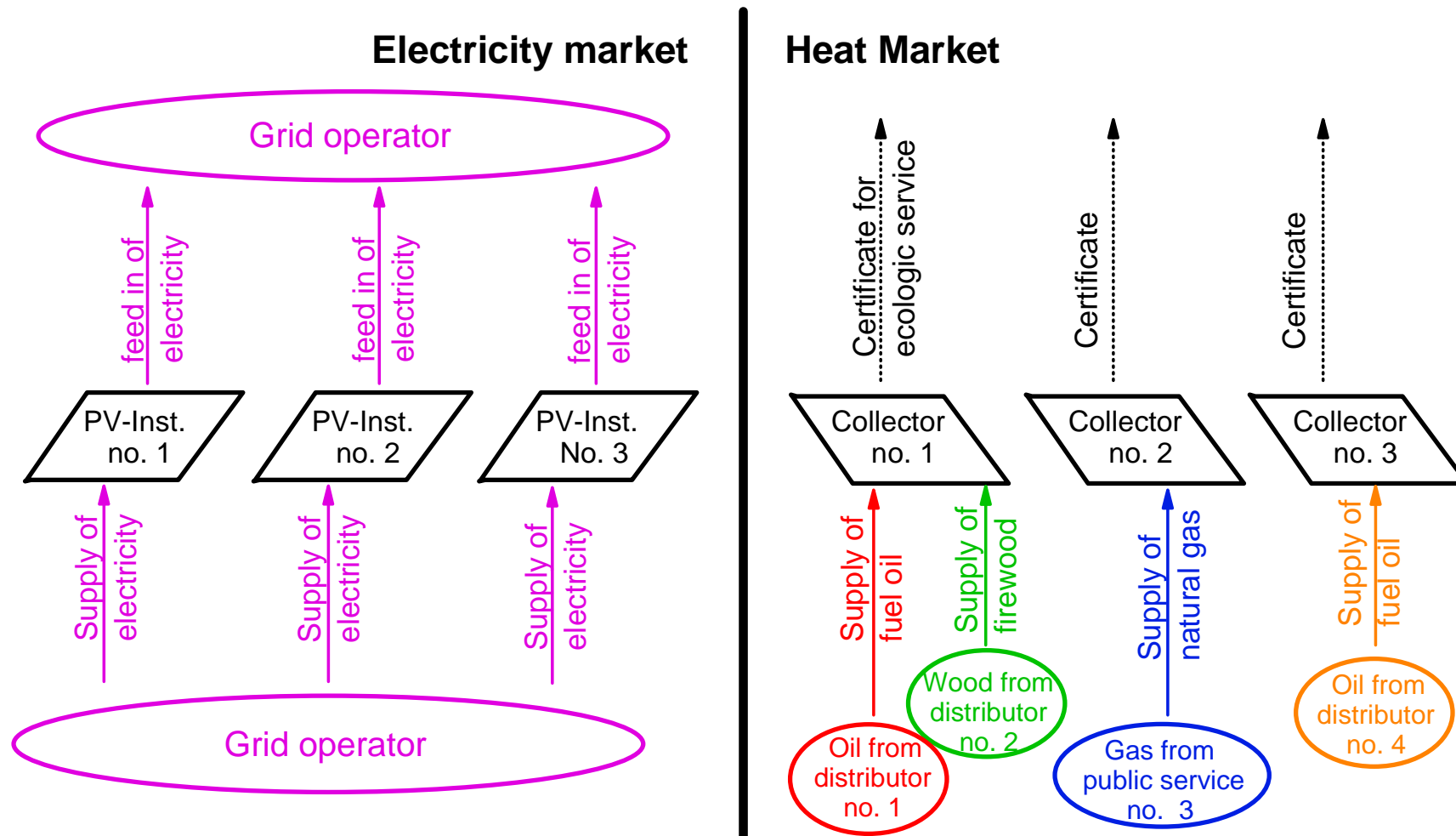
- Little alternatives for optimum allocations. The additional costs get higher than necessary.
- Exceptions are necessary to handle undue hardships.
- For geothermal energy and biomass the complete supply of the building makes sense only.
- Little incentives to create sustainable structures (e.g. district heat).

A transfer of the feed-in law for electricity to the heating market needs some extra procedures



EEG-RegWG.pre

A transfer of the feed-in law for electricity to the heating market needs some extra procedures



EEG-RegWG.pre

b.) Quantity Regulation (Quota)

Principle

- The responsible group (e.g. importers and fuel suppliers) are obliged to sell a certain percentage (quota) of renewable heat along with their fossil fuels.
- The fuel supplier is not required to generate the renewable heat himself. Instead he can buy certificates.
- Certificates are given to the producers of renewable heat.
- The quota is set by law. It increases each year.
- Many options are possible, inter alia:
 - For small systems simplified assignment of the certificates (without heat metering).
 - The sale of fossil fuels can be measured by the energy content or by the CO₂-content.
 - ...

b.) Quantity Regulation (continued)

Advantages

- The polluters are charged.
- High flexibility how the goals are met. This favours economically efficient solutions.
- The goals are met only if the fine for non-compliance is high enough.
- The regulation vanishes by itself as soon as renewable heat has become economic.

Problems

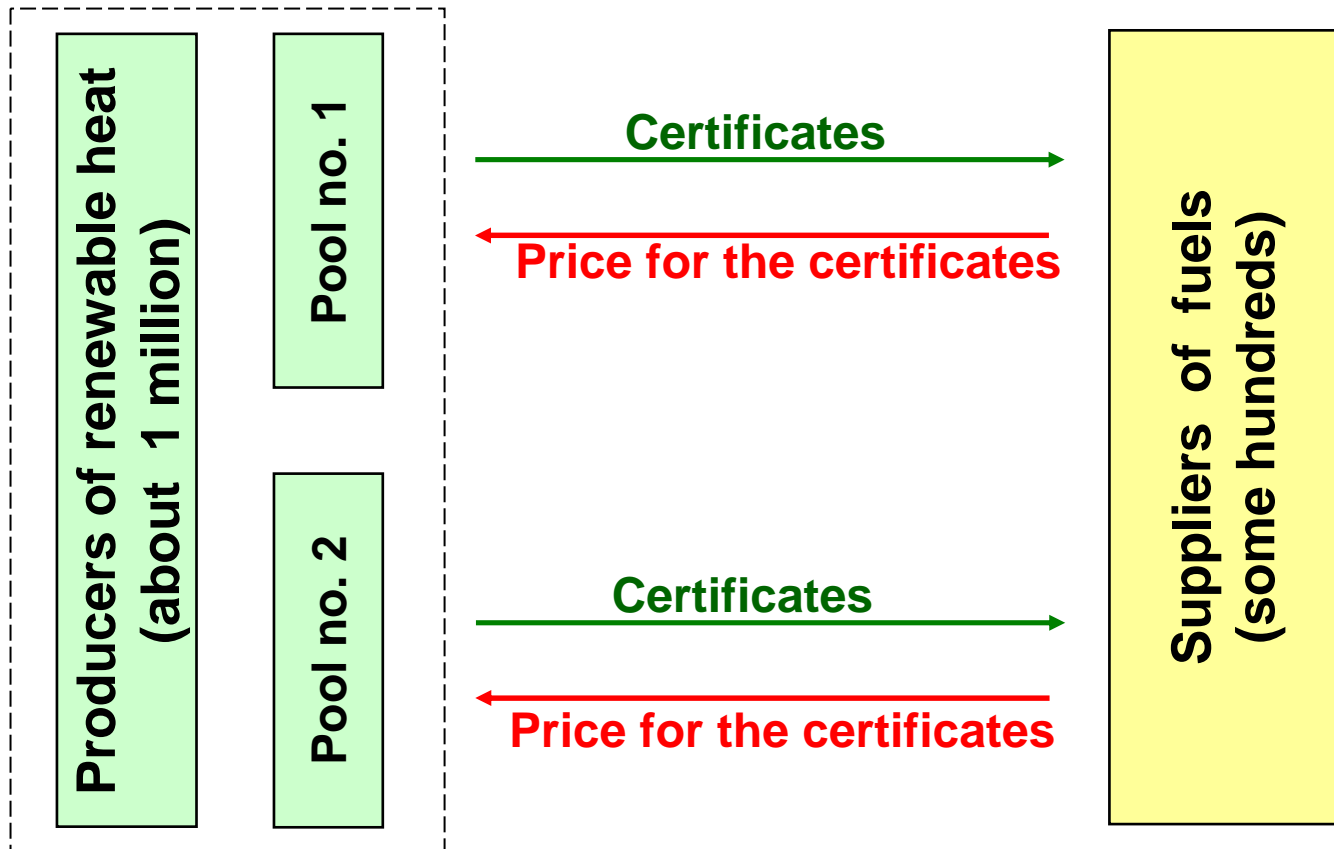
- Complex rules are necessary. Accurate fixing of details is indispensable.
- No reliable calculation of the future prices of the certificates is possible, resulting in premiums for risk!
- Experiences in the electricity market with quantity regulations are disappointing. (In windy Great Britain electricity from wind is more expensive than in Germany!)

c.) Price Regulation

Principle

- Similar as the (German) feed-in law, but:
 - Fuel suppliers are charged instead of the grid operator.
 - The produced heat must be used by the owner of the renewable installation.
 - Instead of energy certificates are sold. Their price is fixed by the parliament.
 - Regulations are necessary to find the appropriate buyer of the certificates (e.g. the producers of renewable heat could establish a common pool that can address each of the fuel suppliers).

c.) Price Regulation (continued)



Advantage of this option:

The producers of renewable heat are self-interested in the build up of the system.

c.) Price Regulation (continued)

Advantages

- As for the feed-in law. Especially no risk because of incalculable future prices of the certificates. Thus no risk premiums are necessary.
- High flexibility of the parliament with respect to the pricing of the certificates. Thus special incentives for certain technologies are possible.

Problems

- A pricing without windfall profits is not as easy as for the feed-in law because contrary to renewable electricity the renewable heat must be used by the operator of the installation. The future value of this heat depends on the unknown future price of fuels.
- The concept is rather new. Up to now there has been less discussion on this regulation than on other proposals.

Preliminary Evaluation of the Three Discussed Regulatic

Requirements on a heat law	EVALUATION		
	Ordinance	Quantity regulation	Price regulation
Short-term goal achievement predictability (by ca. 2010)	0	(+)	0
Long-term development strategy (distinguishing between technologies, expansion of district heat)	-	0	+
Cost efficiency (minimising windfall gains and transaction costs, promoting economic competition)	-	+	+
No risk premiums	+	-	+
Independence from public budgets	+	+	+
Charging of polluters	-	+	+
Political enforceability	+	0	0
Legal conformity	+	+	+

Summary

- A new regulation for the heating market in favour of renewable energies is necessary. The present regulations are insufficient.
- The new instrument should
 - charge the polluters,
 - contribute to develop hitherto neglected markets,
 - contribute to the development of new technologies,
 - favour the structural changes that are necessary for sustainable development (especially small district heating schemes).
- Several proposals with their particular advantages and problems are under consideration.
- Each of the discussed regulations can be more effective than the present budget-dependent regulation.
- From the scientific point of view the most promising instrument is the price regulation (similar to the feed-in law).