



SWHs Industry in Syria

Current Situation & prospects

Workshop on Solar Thermal Applications in
Egypt, Lebanon, Syria and Jordan
Cairo 24 - March - 2009

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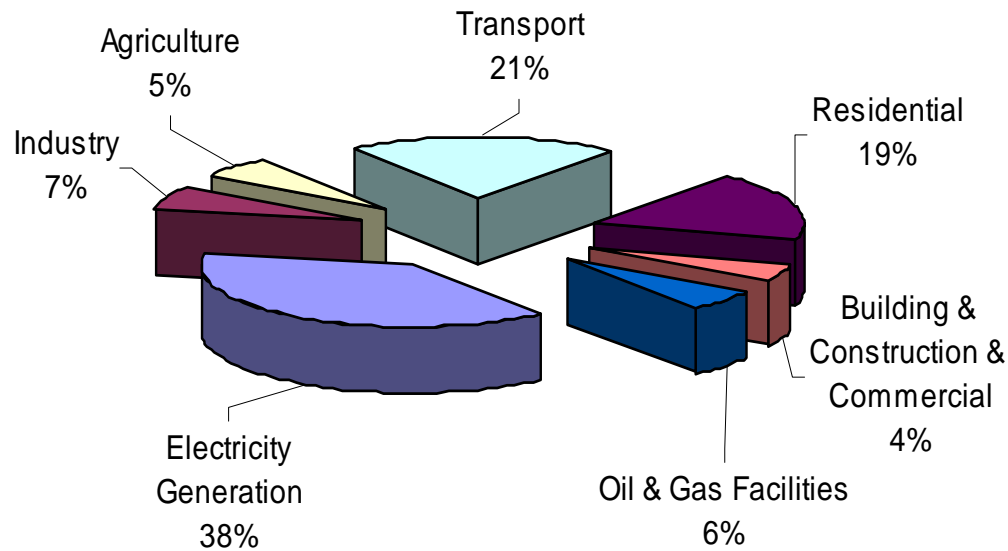
Content:

- Energy Main Indicators in Syria
- Solar Energy Sector Assessment
- Market Evaluation
- Promoting Regulations and Financial Programs

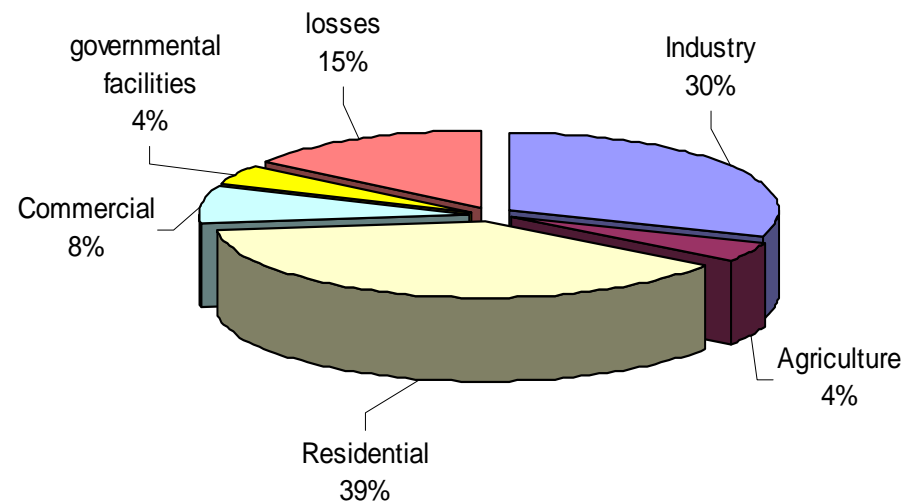
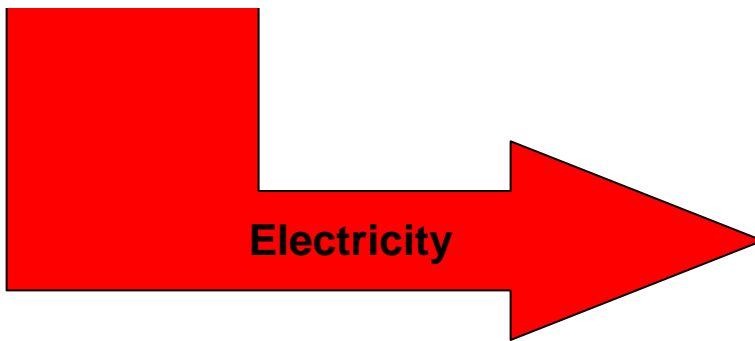
Energy Indicators in Syria in 2007:

Items	Units	Values
Population	Million	19.4
Total Energy Demand	M TOE	23.5
Oil Products	M TOE	17.5
Natural Gas	M TOE	4.5
Hydro Energy	M TOE	0.9
Biomass Energy	M TOE	0.6

Distribution of Primary Energy Demand in Syria By Sector in 2007



Electricity Demand by sector in 2007



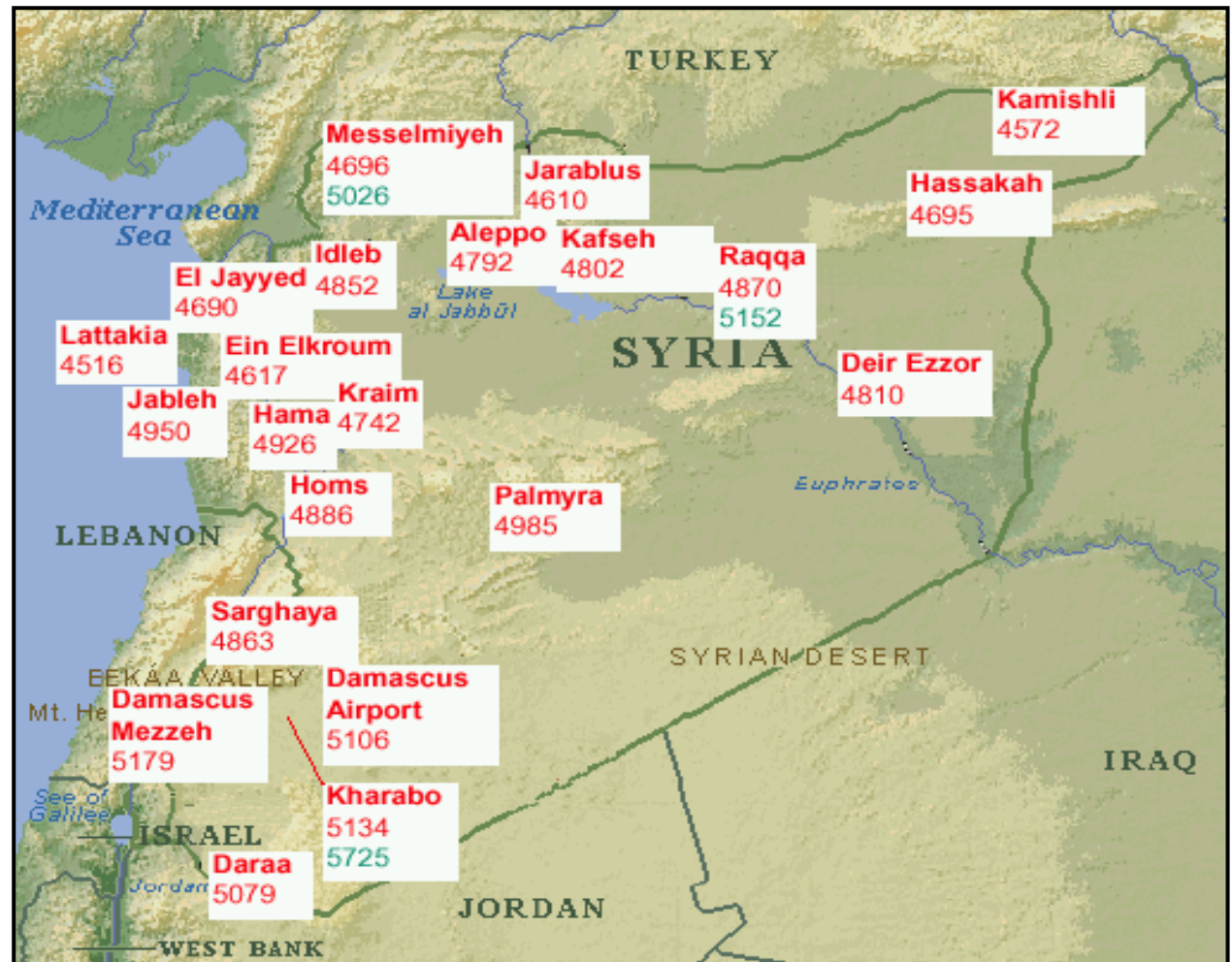
Solar Energy Potential in Syria

The average global horizontal solar radiant flux in Syria is approximately

5 kWh/m²/day

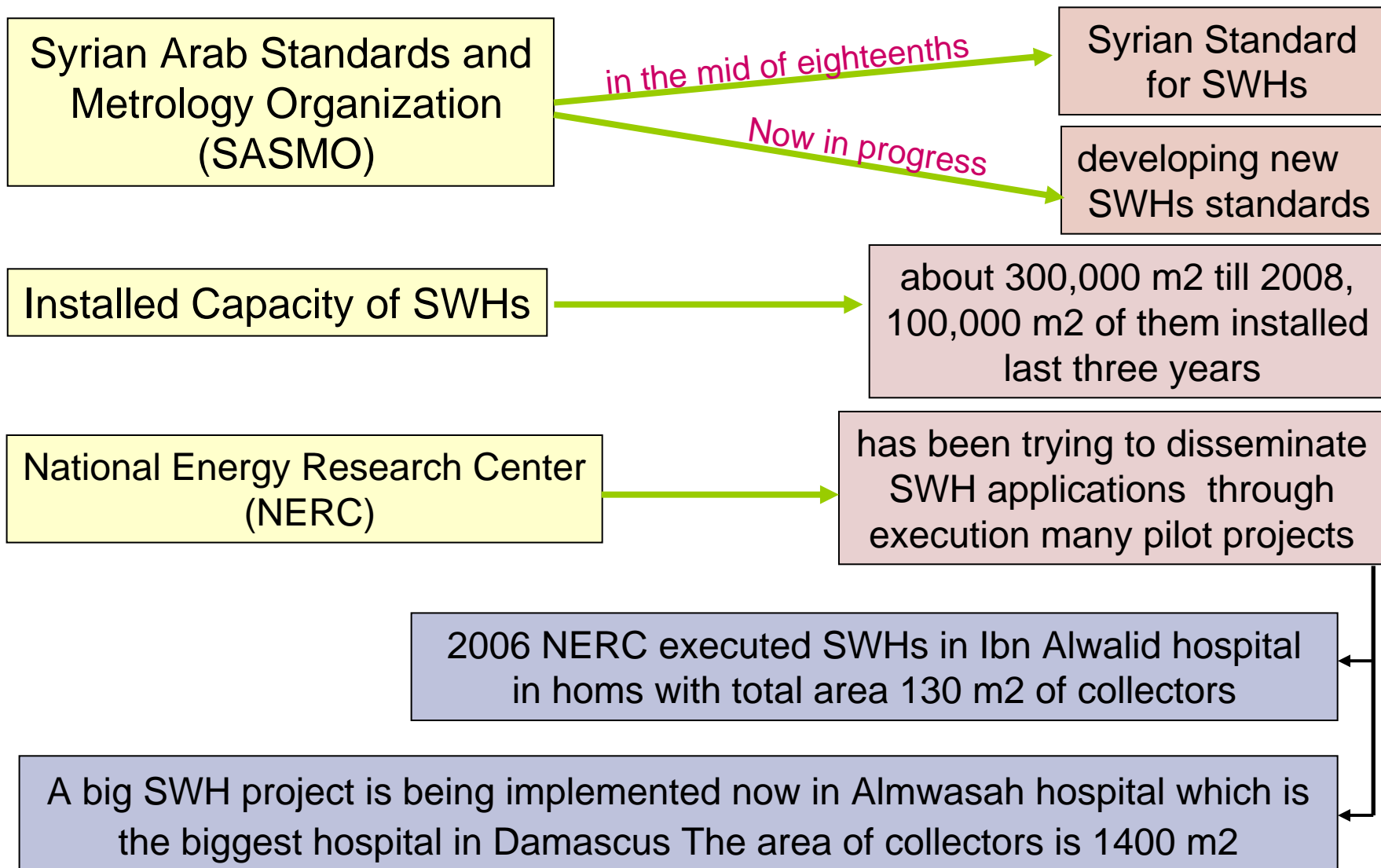
or

1.8 MWh/m²/Year



Mean Annual Daily Radiation on Horizontal Surface Wh/m²

Solar Water Heating Technology, History and Current situation:



one year ago the energy carriers prices increased especially diesel and electricity



Syrians start thinking for alternatives, SWHs is the best available proved technology in the local market

In General:

Solar water heating are the most RE common technology in Syria for many reasons:

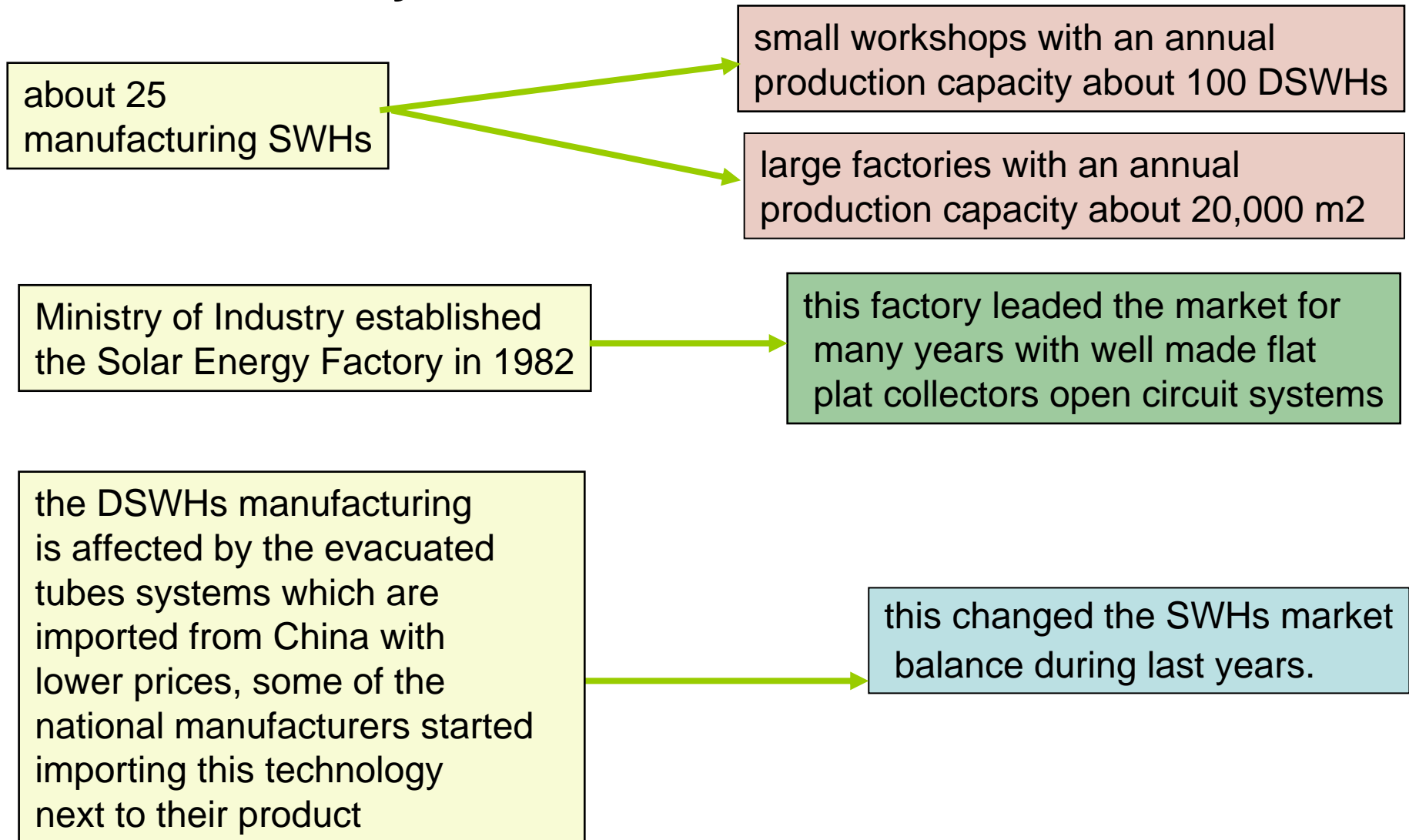
- ***There are many manufacturers and importers of SWHs.***
- ***Prices of water heating solar systems is nearly reasonable.***
- ***The average solar radiation is about 5 kWh/m²/day.***
- ***SWHs are easy to install and enough experience is available.***
- ***Savings appear directly especially in the governmental side.***

Efforts is being concentrated to set a national strategy with a target of installing 100,000 m² annually especially in residential and commercial sectors

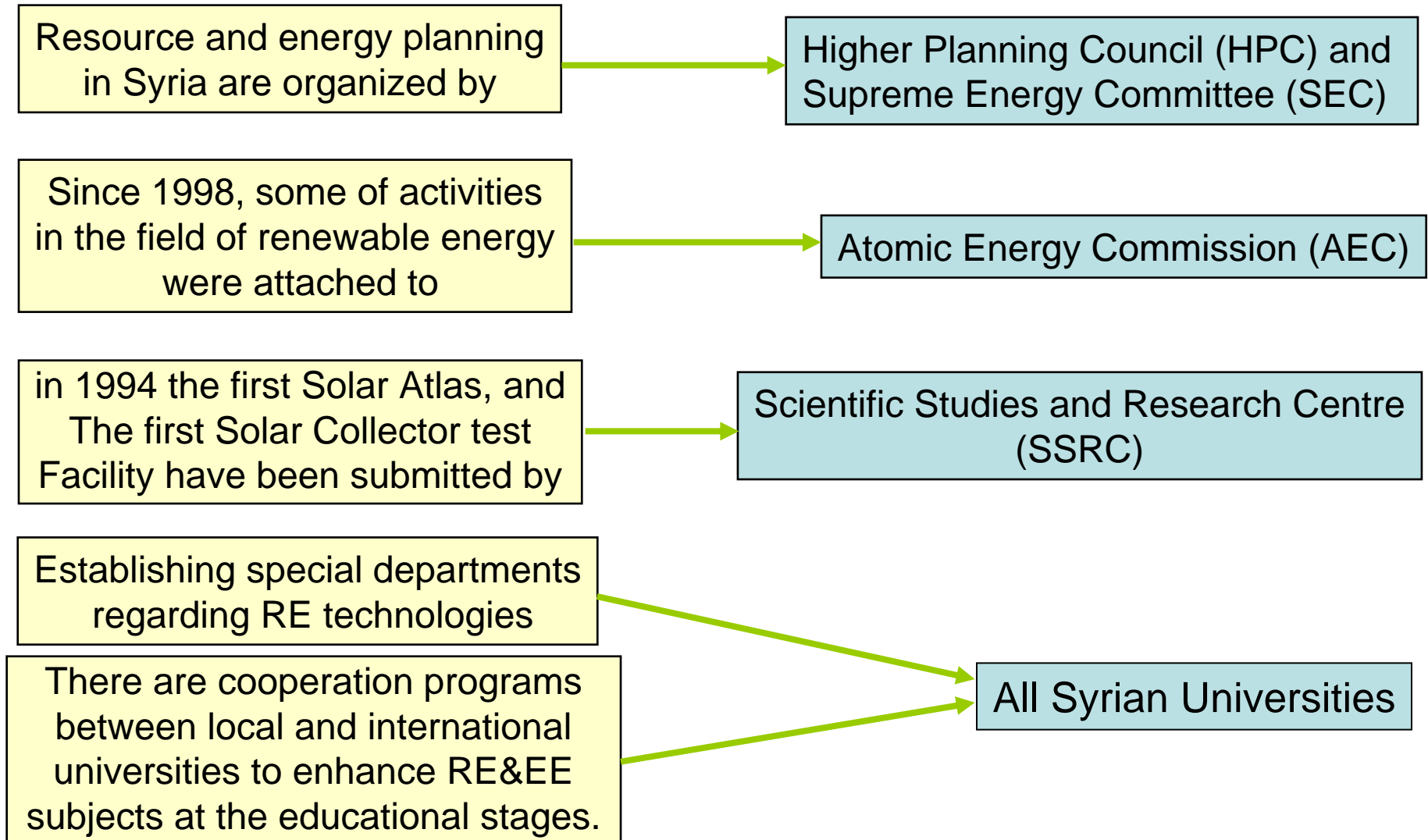


that will encourage the national SWH industry to be improved.

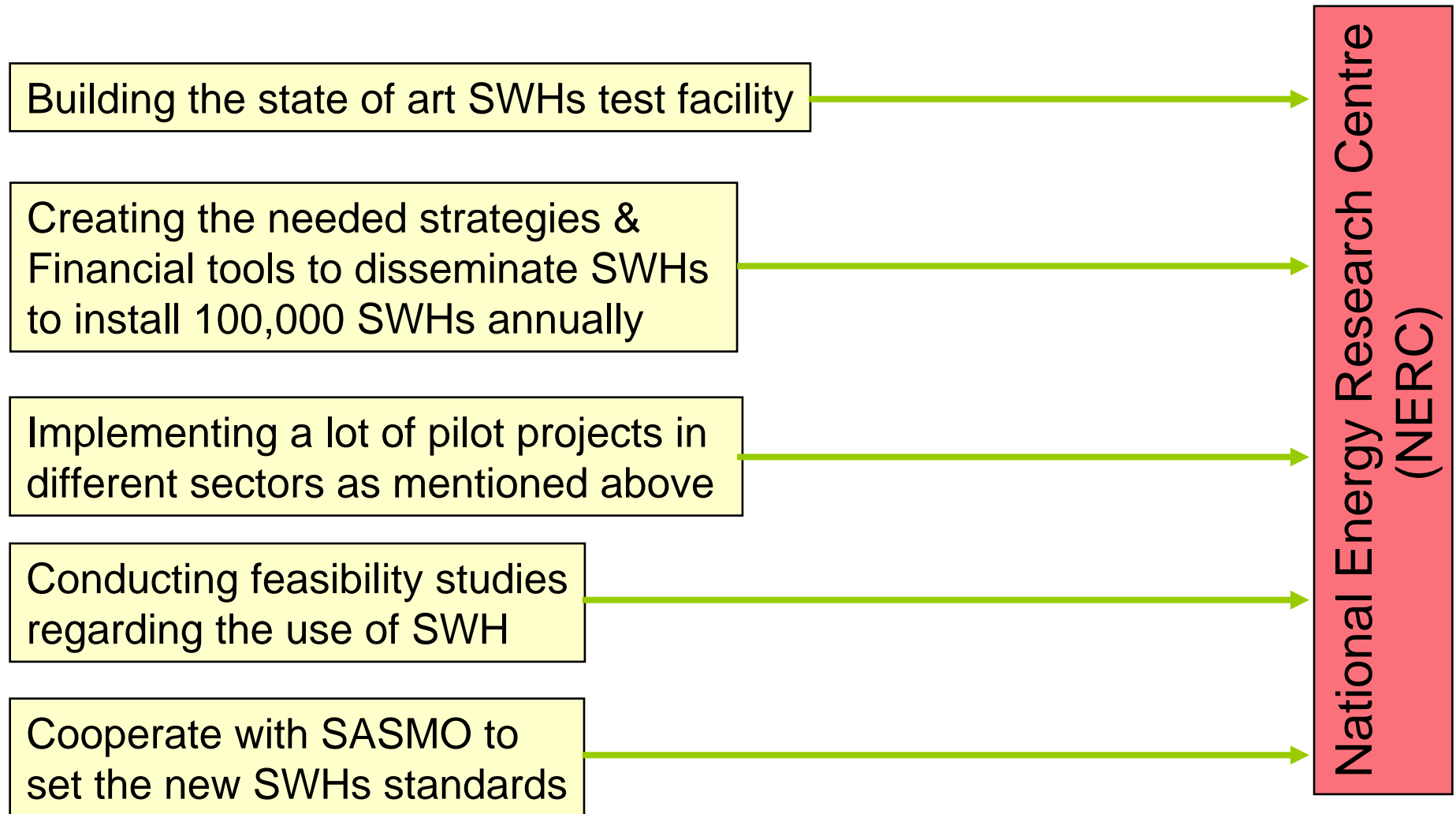
SWHs Industry:



R&D Institutional Framework :

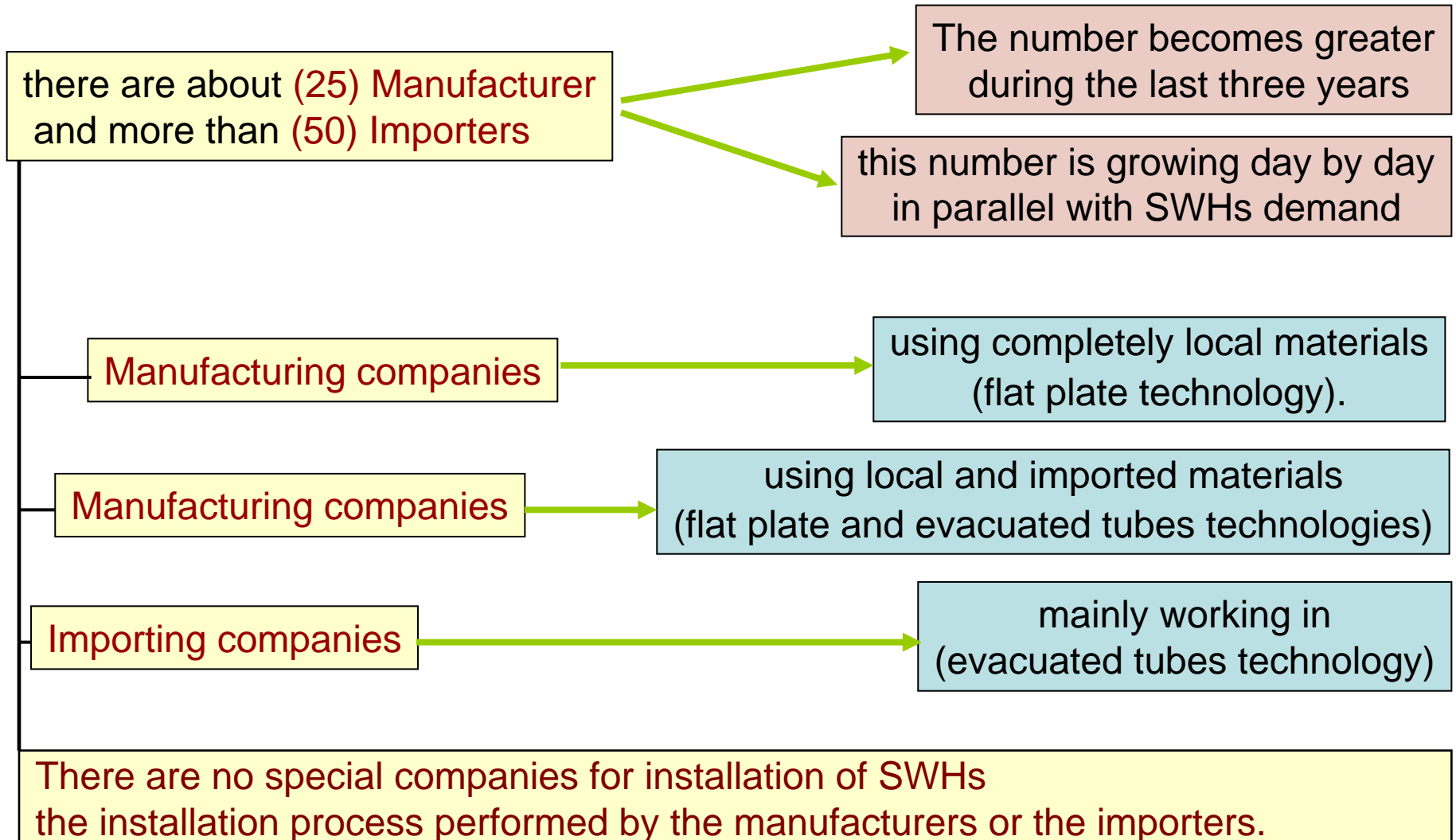


R&D Institutional Framework :



Market Evaluation:

SWHs Local Companies:



Market Evaluation:

Prices

The average price for a typical SWHs for a family consist of 3-5 persons with installation costs of accessories is

Up to **60,000 S.P (960 €)**
For flat plate system

About **35,000 S.P (560 €)**
For evacuated tube system

market confusion about the differences between the two systems,

this could not be avoided because of the absence of a certification system

Business Organizations

There are no effective business organizations concerning SWHs market or companies, but we can say that three business organizations are involved

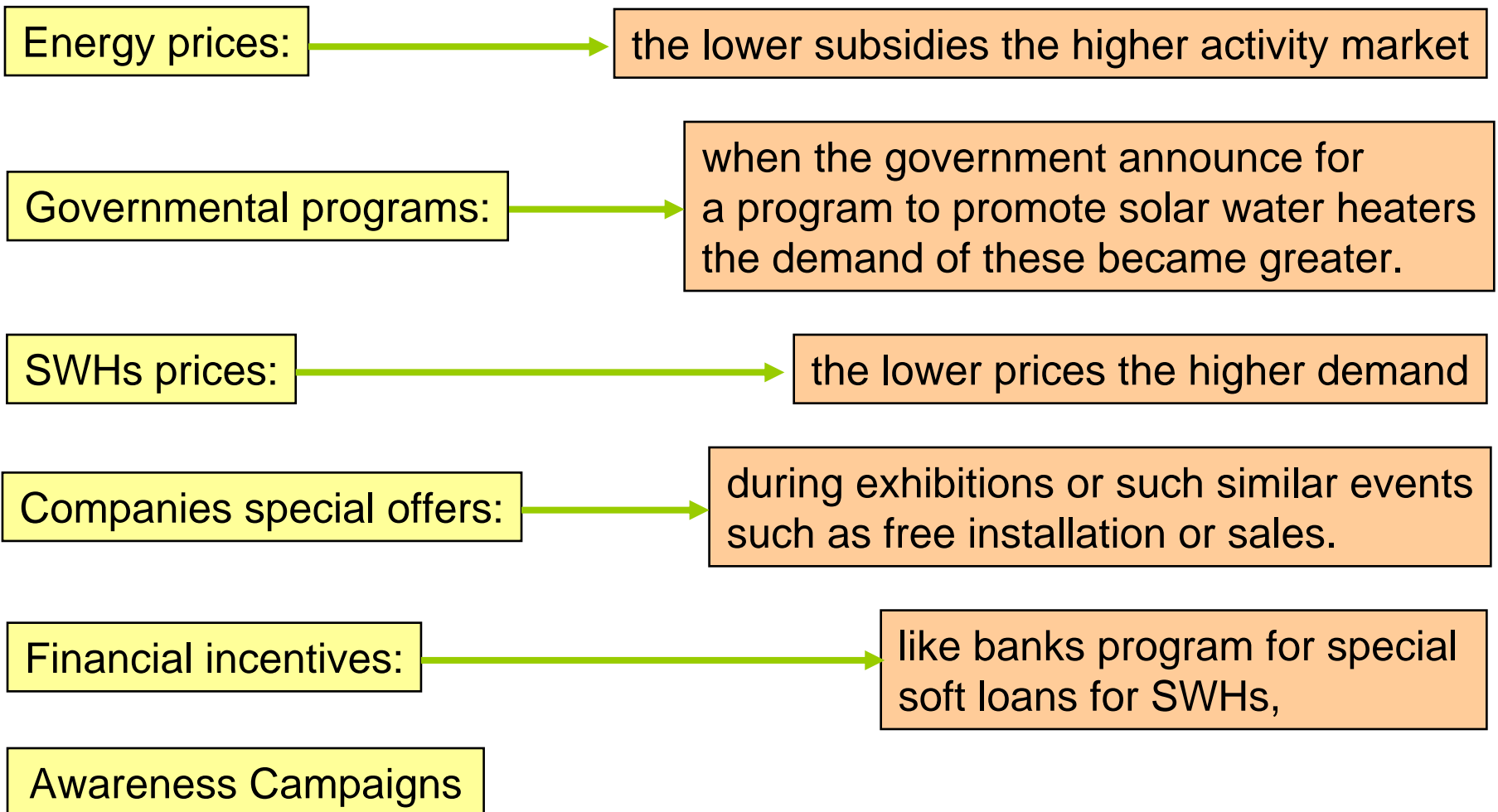
Industrial Chambers

Commercial Chamber

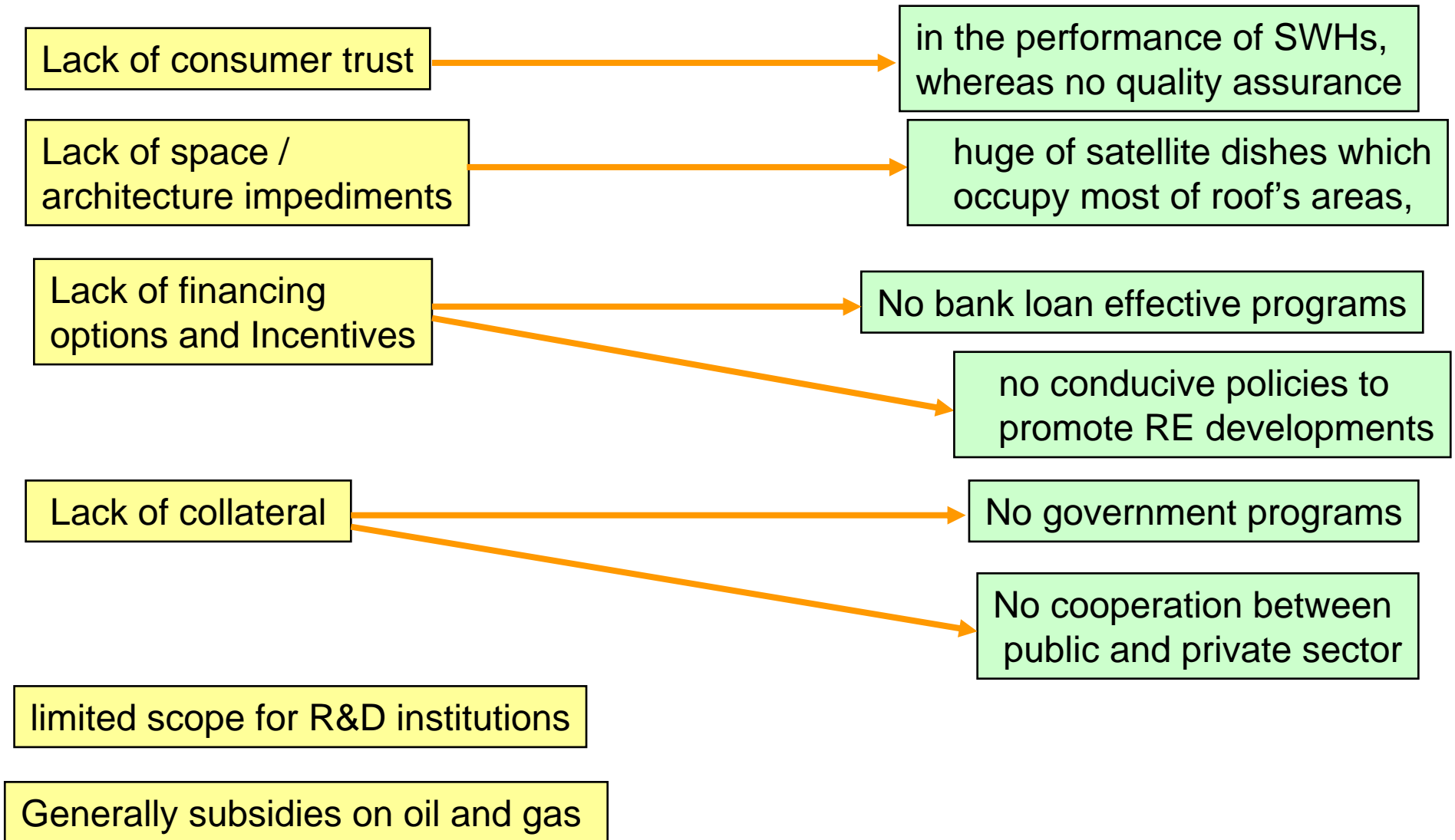
Engineers Syndicates

Market Evaluation:

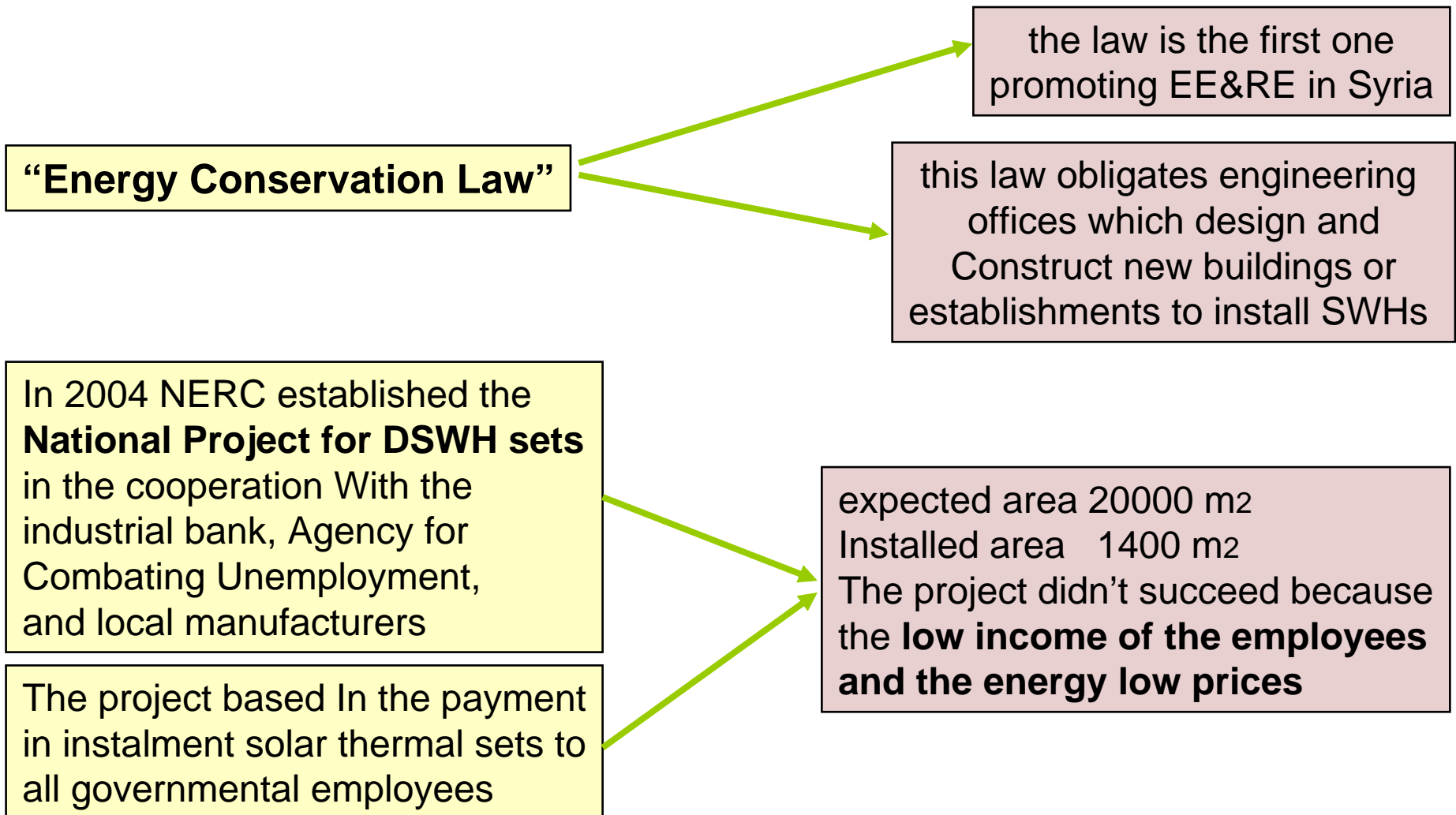
Market Drivers



SWHs Sector Barriers



Promoting Regulations and Financial Programs



Promoting Regulations and Financial Programs

As a result of the mentioned project NERC suggested a new policy for solar thermal applications in residential sector



this policy concentrated on the government subsidy to expand solar applications, the proposal have been discussing in the government for 2 years and it expected to be adopted soon

The Syrian commercial bank presents soft loans with an interest rate of 2% for SWHs

Some private banks in cooperation with some companies also offered loans for SWHs (exp. Audi bank in cooperation with Altawfeer Co.

Conclusion

The vision clarify that the SWHs sector has its all components, these components needed to be refined, developed and well directed, this could achieved by providing a direct support and active cooperation between all players.



Energy Services & Consulting

Thank you for your attention

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