



**REVOLUTIONIZING  
ENERGY**

**A Plan to Convert Israel Fossil Energy to  
Solar**

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Technion 9-2-09

# Aim of the presentation

**Presenting the possibility,  
the action items required  
and the consequences  
to convert Israel fossil based  
electricity production  
into Solar**

# The technologies chosen

- **CPV developed by MST**
- **Flowing batteries developed by EnStore**

# Cost baseline

## CPV

- **\$4000/KWp for first 1000MW installed**
- **\$2300/KWp for next 4000MW installed**
- **\$2000/KWp for installations beyond 5000MWp**

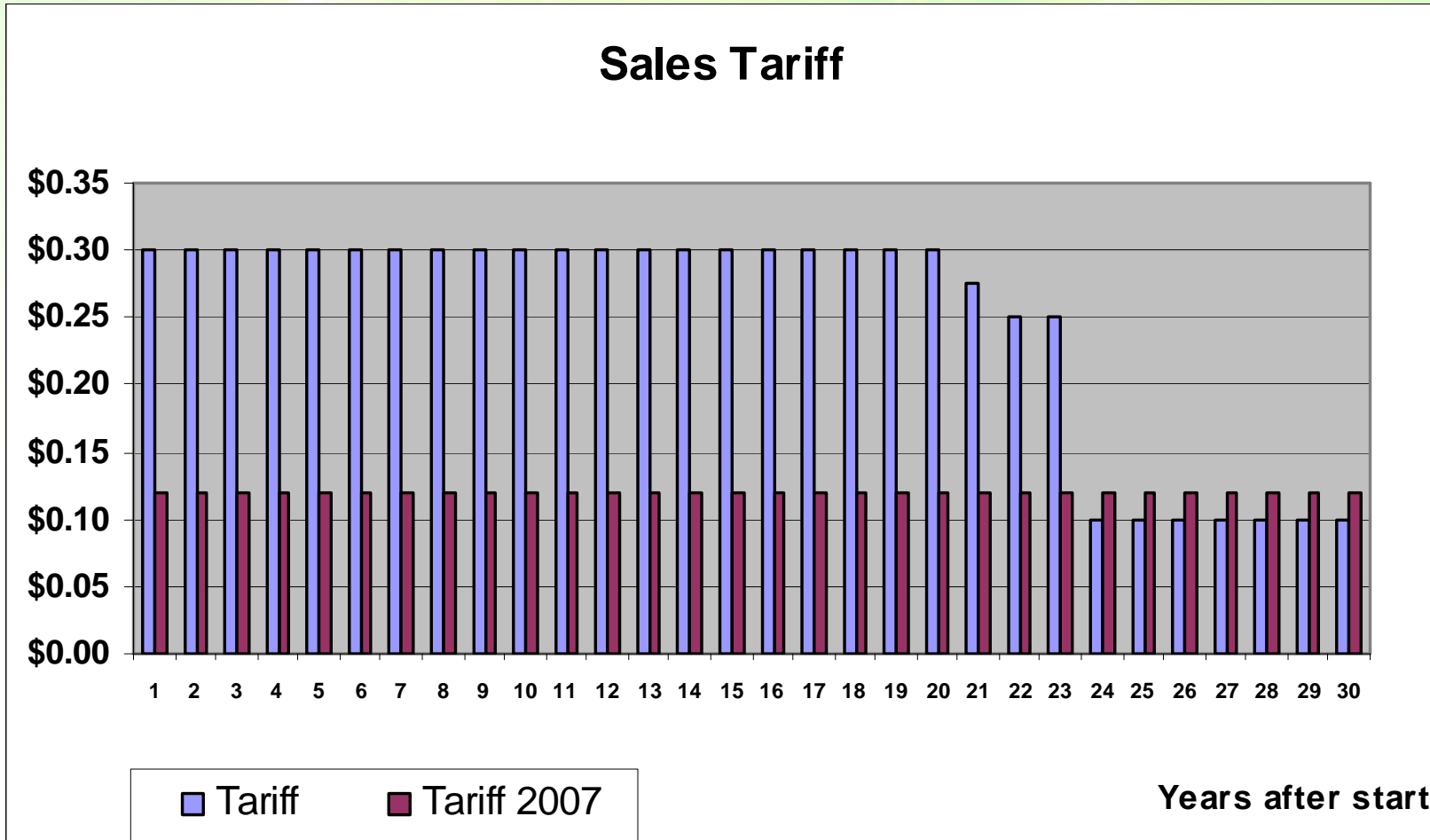
## Storage

- **\$2000/KW for first 1000MW installed**
- **\$1000/KW thereafter**



# Tariff

## Sales Tariff



# Land required

- 10 kmsq per 1000MWp
- 430 kmsq per 43,000MWp

# The 30 Years Plan

**Install 43,000 MWp solar**

**Producing 86Bkwh yearly**

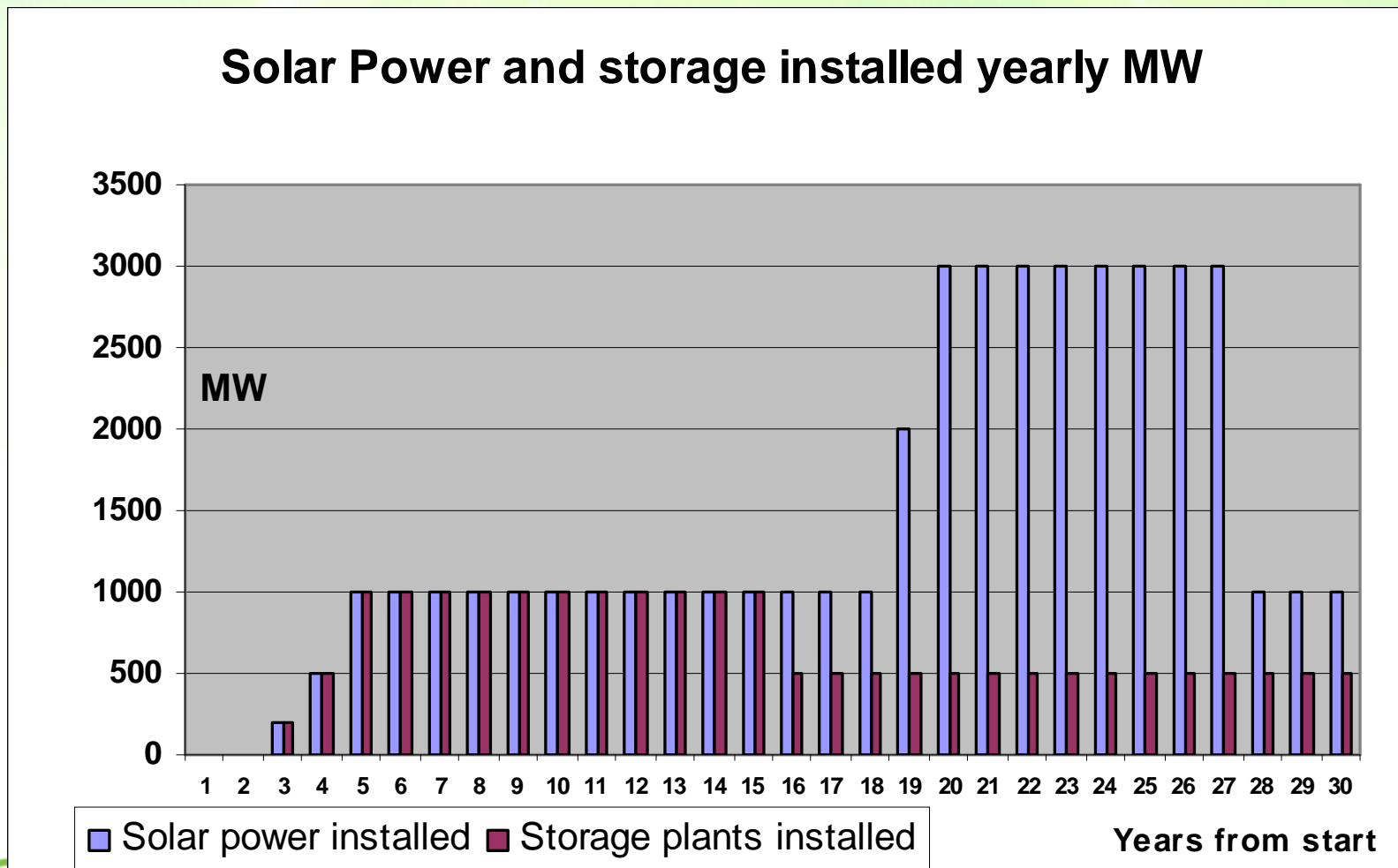
**Supplying 85% of the energy required**

**Install 22,000MW storage**

**This will allow full accountability of the solar power by the grid and**

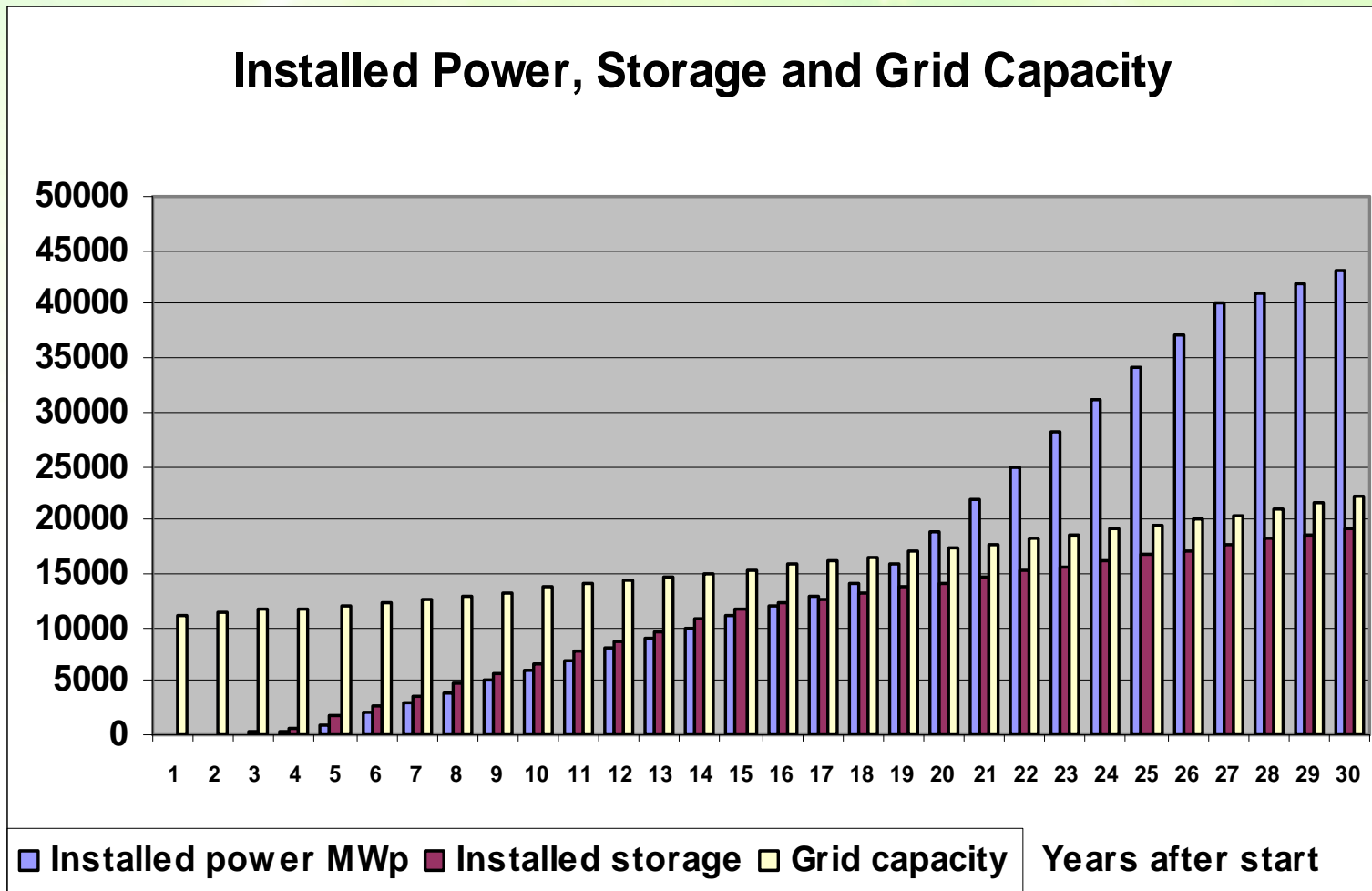
**Provide solar power during night**

# Yearly installed plants

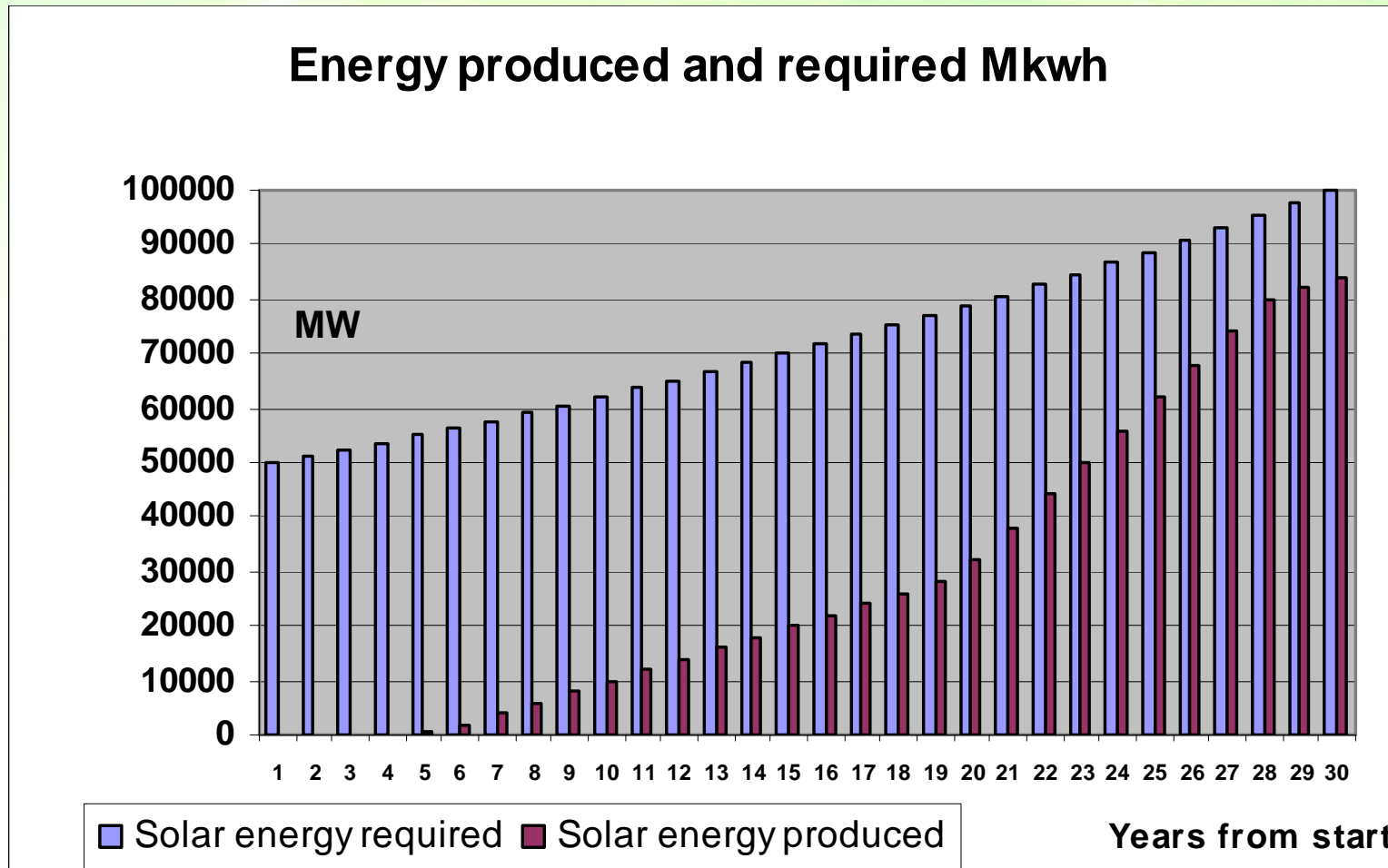




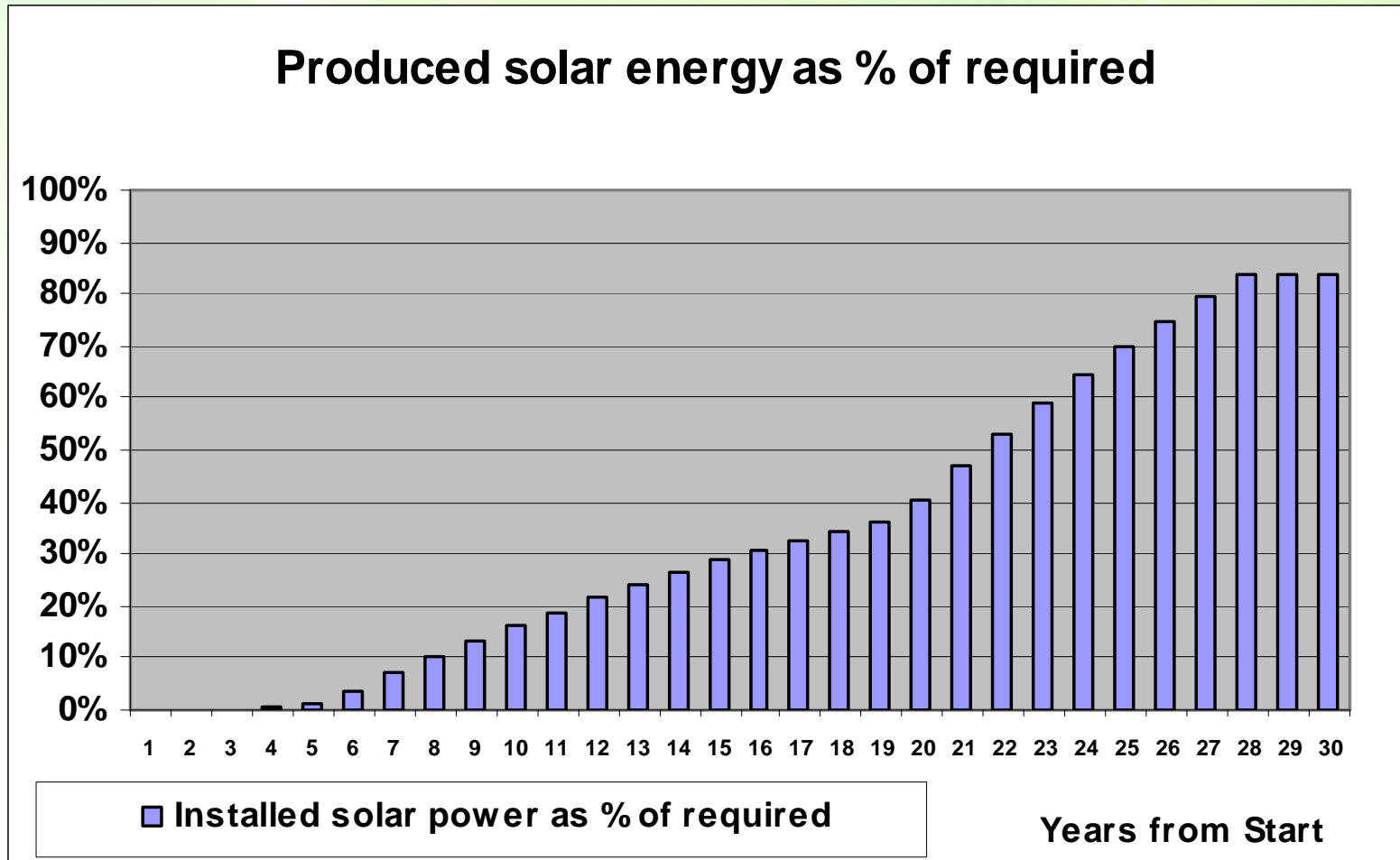
# Accumulated installed plants



# Energy produced and required

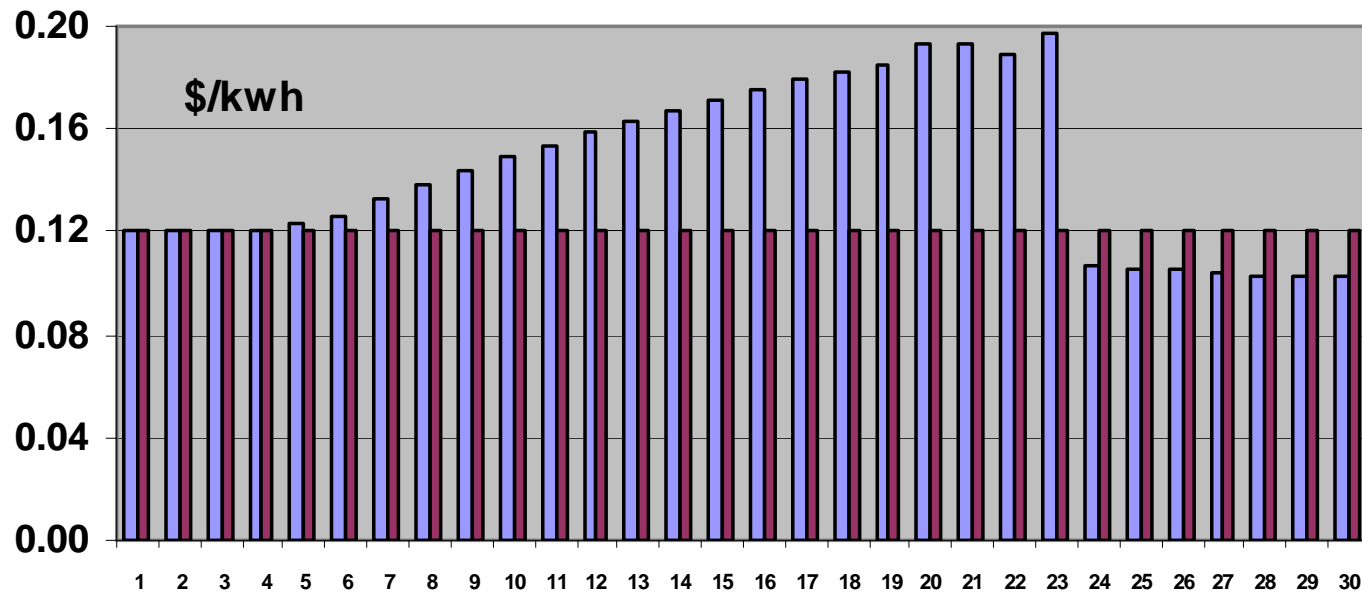


# Energy produced as % of required



# Yearly installed plants

**Cost of kwh to the consumer to cover renewable energy cost**

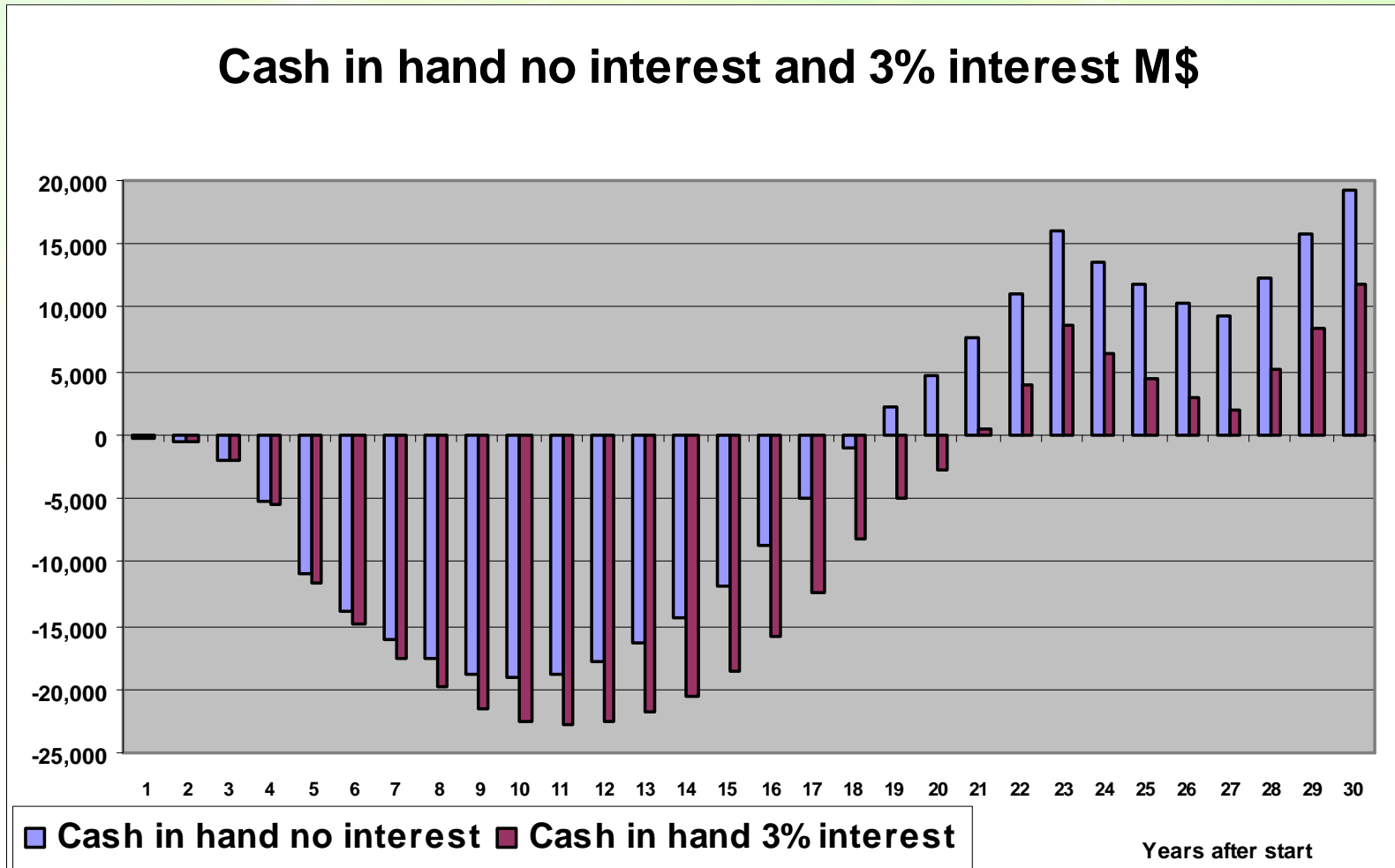


■ Required IEC tariff

■ IEC tariff 2007

After project start

# Credit line required





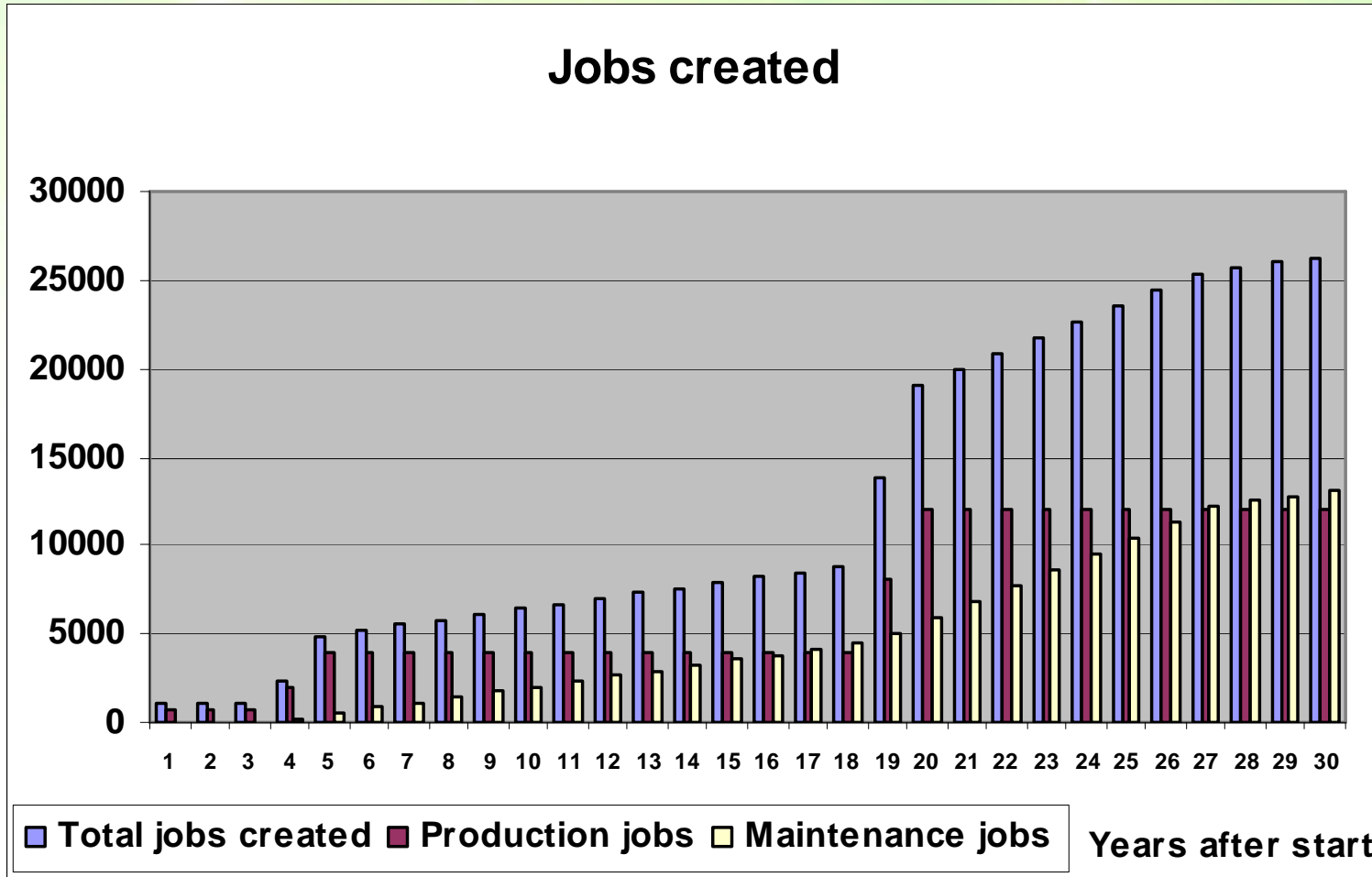
# Foreign currency saved during 30 years

- Saving will be \$46B in today fuel cost
- Saving will be \$74B if fuel cost escalates 2% per year,
- Saving will be \$120B if fuel cost escalates 4% per year

## Israel National debt is \$132B

Fuel escalation yearly	0%	1%	2%	3%	4%	5%
Saving M\$ over 30 years	45,840	58,295	74,197	94,498	120,406	153,455

# Jobs created



# Concluding Remarks to the Israeli Government

- The Project should be defined as National Priority
- The Project should be given priority over Imported ones
- Land must be provided timely, at sufficient quantity and for adequate period of time (30 years)
- The Project is Capital Intensive as well as Benefits Intensive
- Private funding will not deliver the Goods
  - National Goals Should Be Achieved By  
National Investment



# The Power Frame



# The Tracker

