

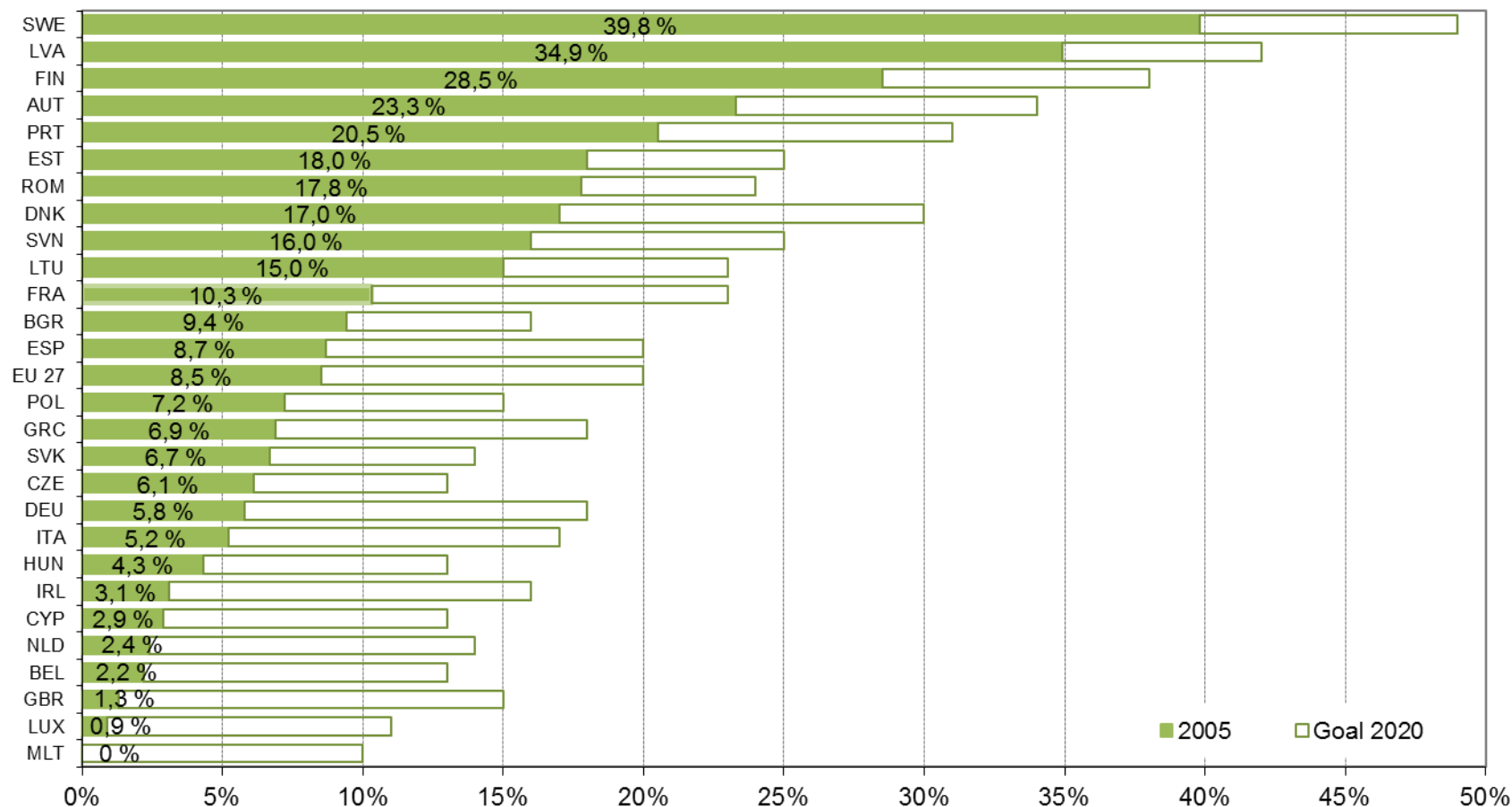
Renewable Energy Trends in Finland

Update 20 November 2014



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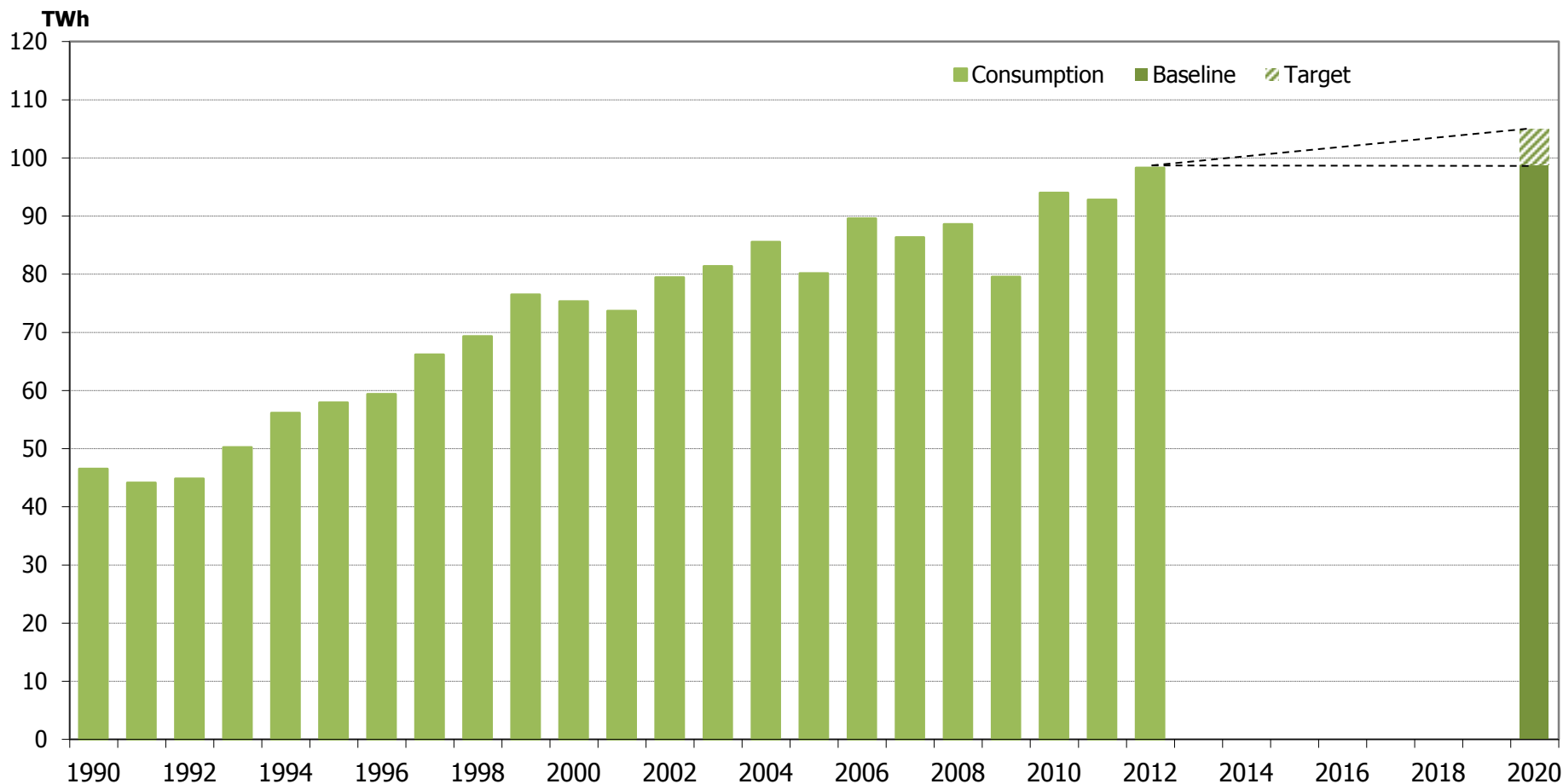
Share of Renewable Energy Sources of Total Energy Consumption in EU-27 in 2005 and Indicative Targets for 2020



Source: Directive on the promotion of the use of energy from renewable sources, 2008/0016



Total Consumption of Bioenergy in Finland



These statistics do not include peat.

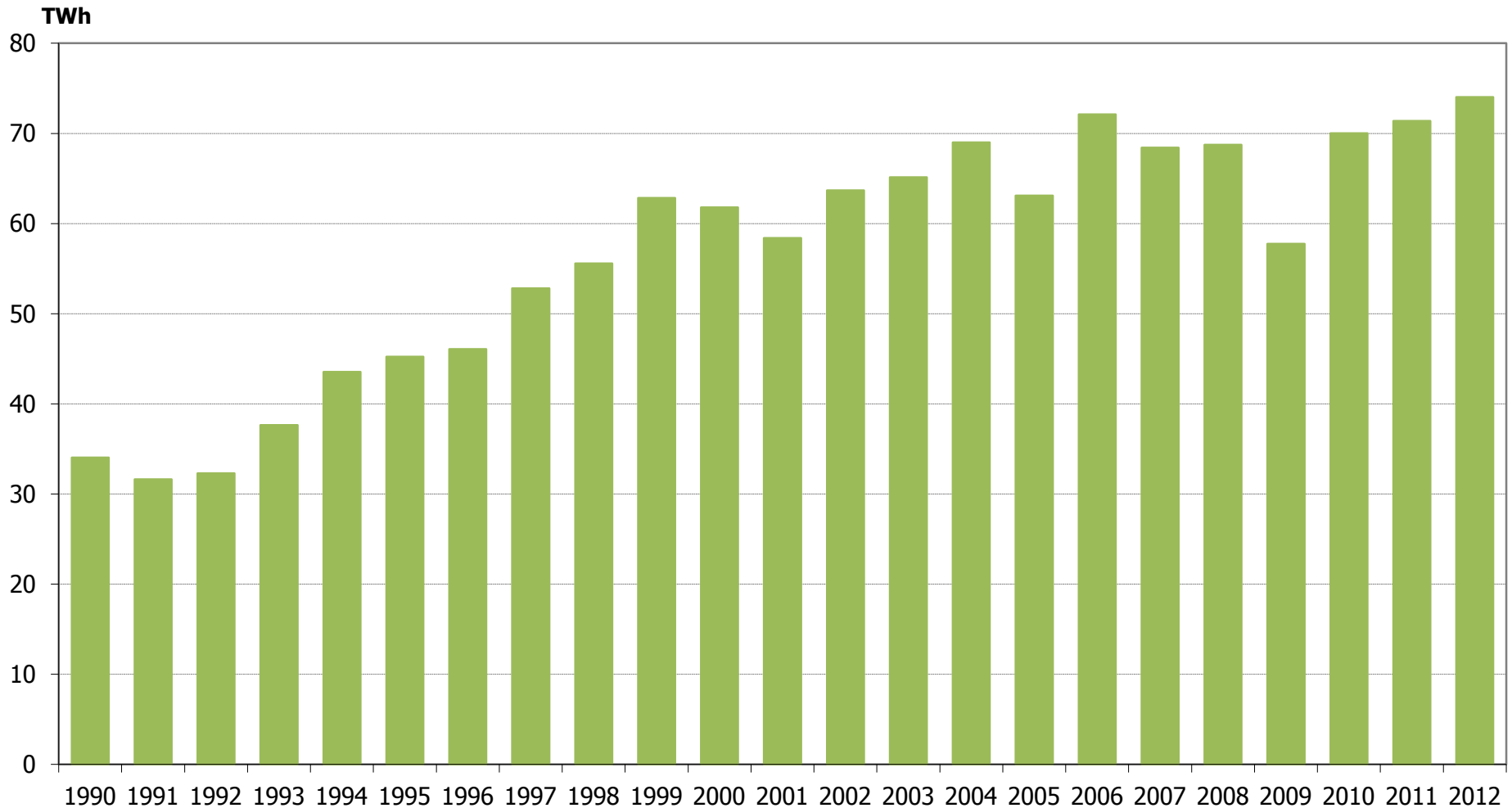
Sources: Statistics Finland, Energy statistics 1991-2013 (years 1990-2012)

Long-term climate and energy strategy, VNS 11/2008 (baseline)

Package of obligations concerning renewable energy, 20.4.2010 (target)



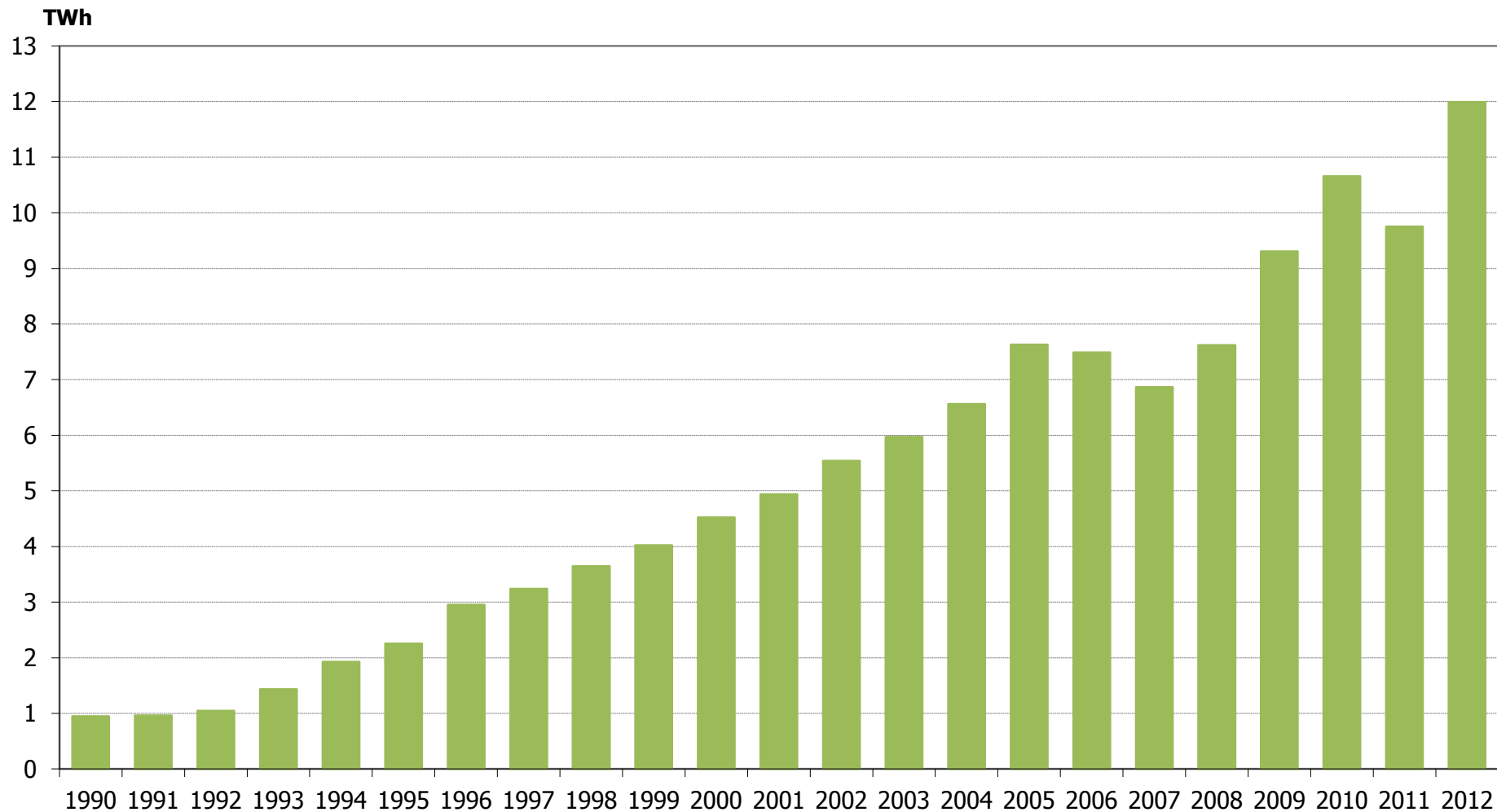
Consumption of Bioenergy in Industry



Source: Statistics Finland, Energy statistics 1991-2013 (years 1990-2012)



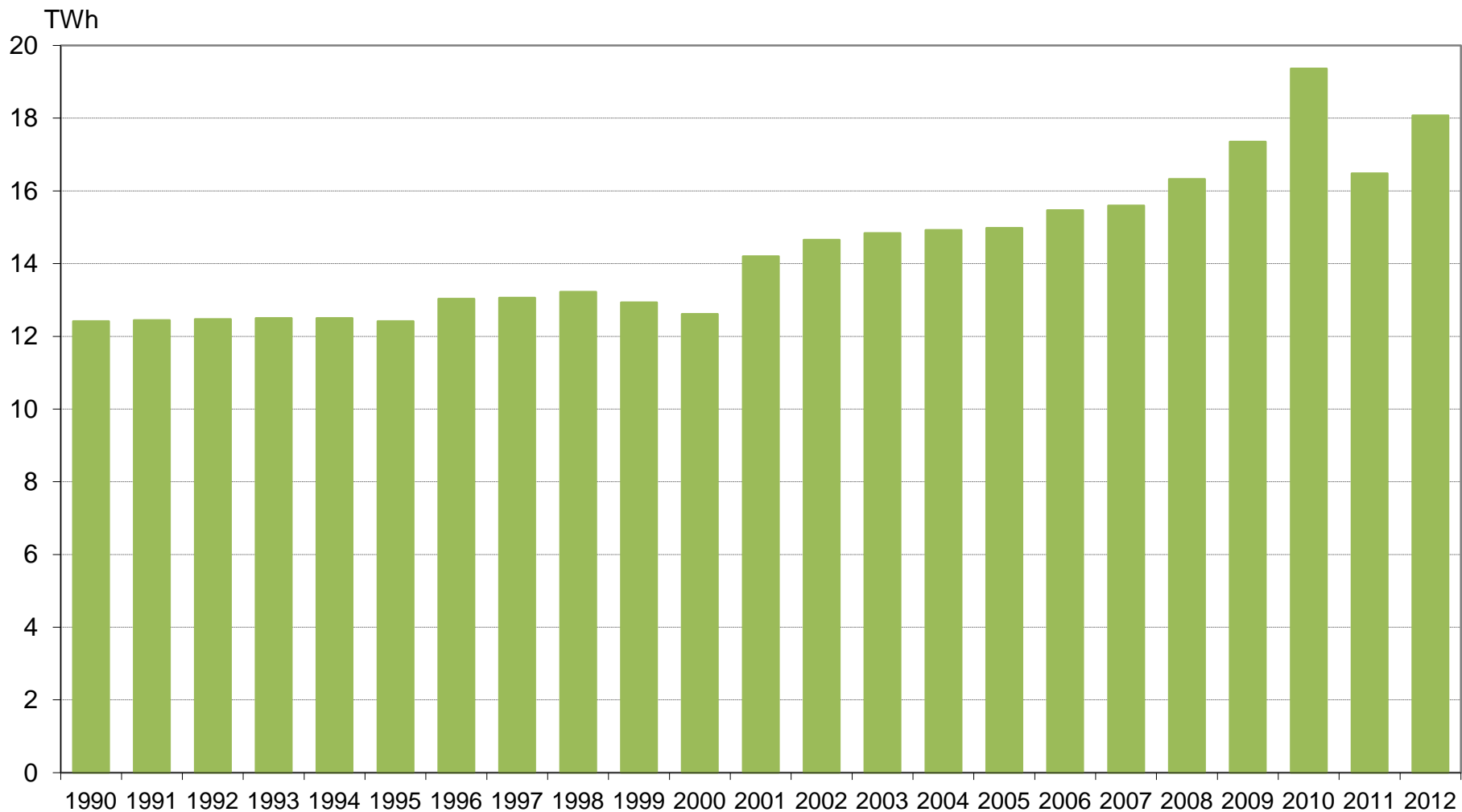
Consumption of Bioenergy in District Heating



Source: Statistics Finland, Energy statistics 1991-2013 (years 1990-2012)



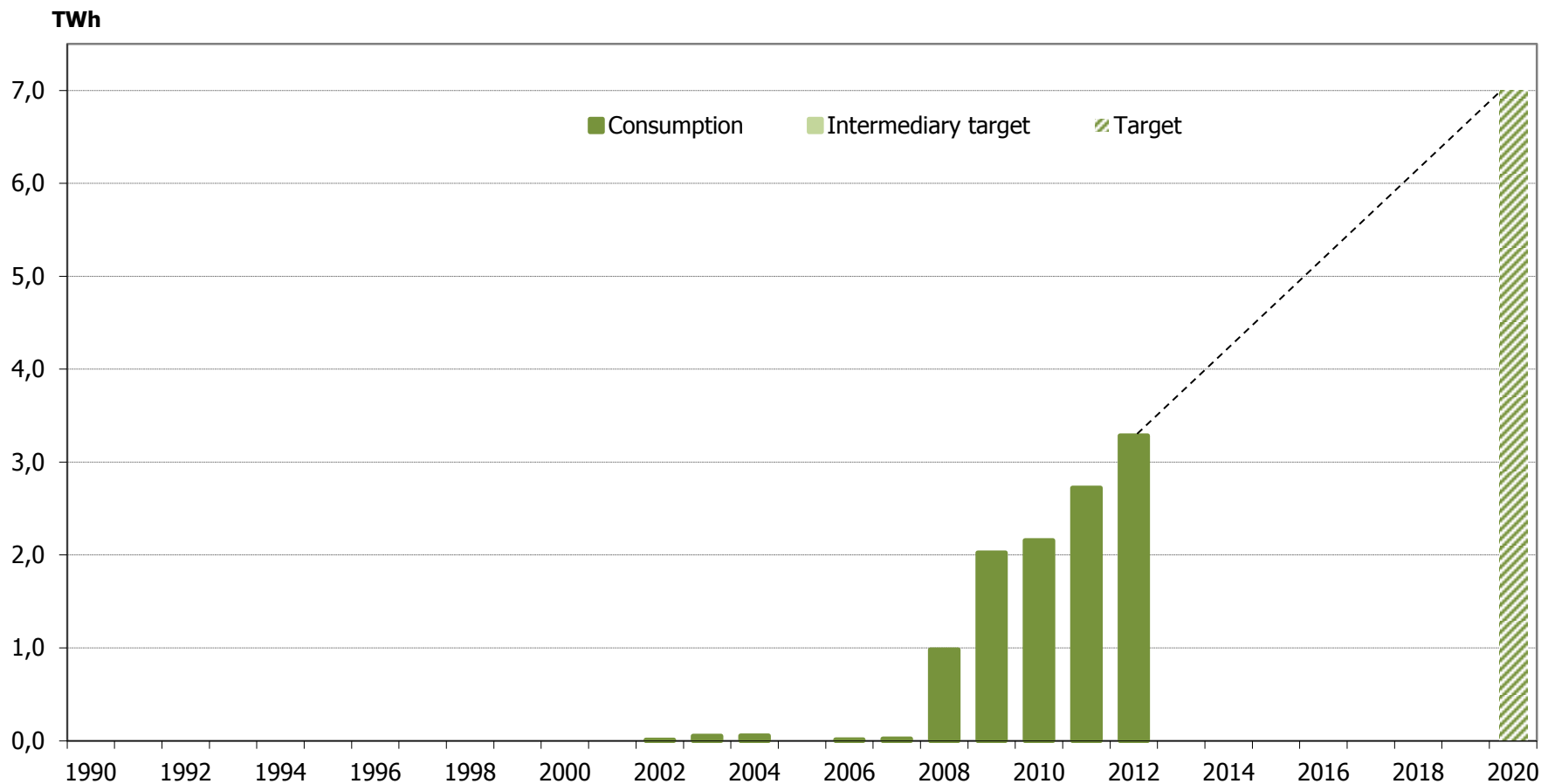
Small-Scale Consumption of Bioenergy



Source: Statistics Finland, Energy statistics 1991-2013 (years 1990-2012)



Consumption of Biofuels in the Transport Sector



Statistics include liquid biofuels used in transportation, mobile machinery and heating.

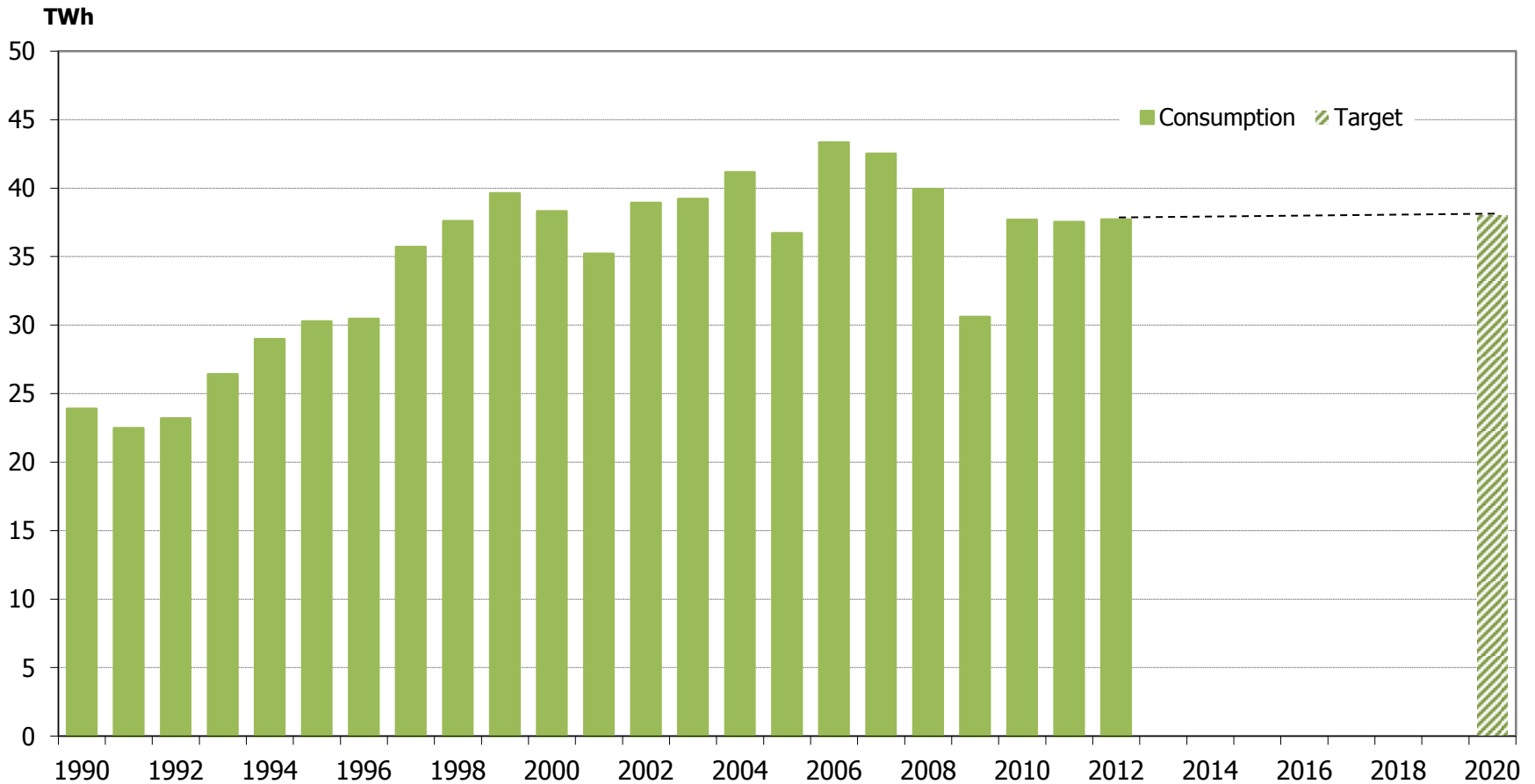
Sources: Statistics Finland, Energy statistics 2003-2013 (years 2002-2012)

Long-term climate and energy strategy, VNS 11/2008 (intermediary target)

Package of obligations concerning renewable energy, 20.4.2010 (target)



Black and Other Concentrated Liquors

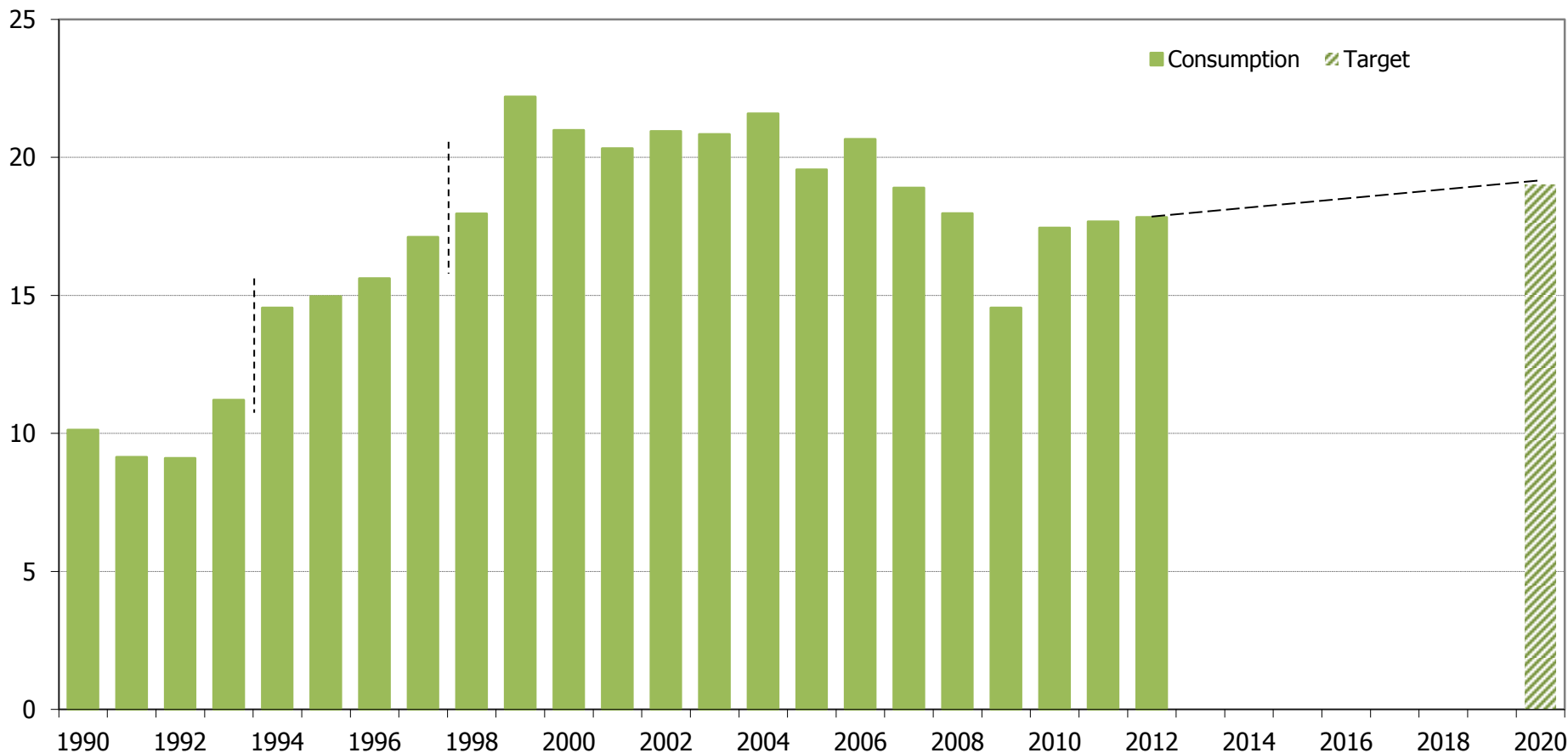


Sources: Statistics Finland, Energy statistics 1991-2013 (years 1990-2012)
Package of obligations concerning renewable energy, 20.4.2010 (target)



Industrial Wood Residues

TWh



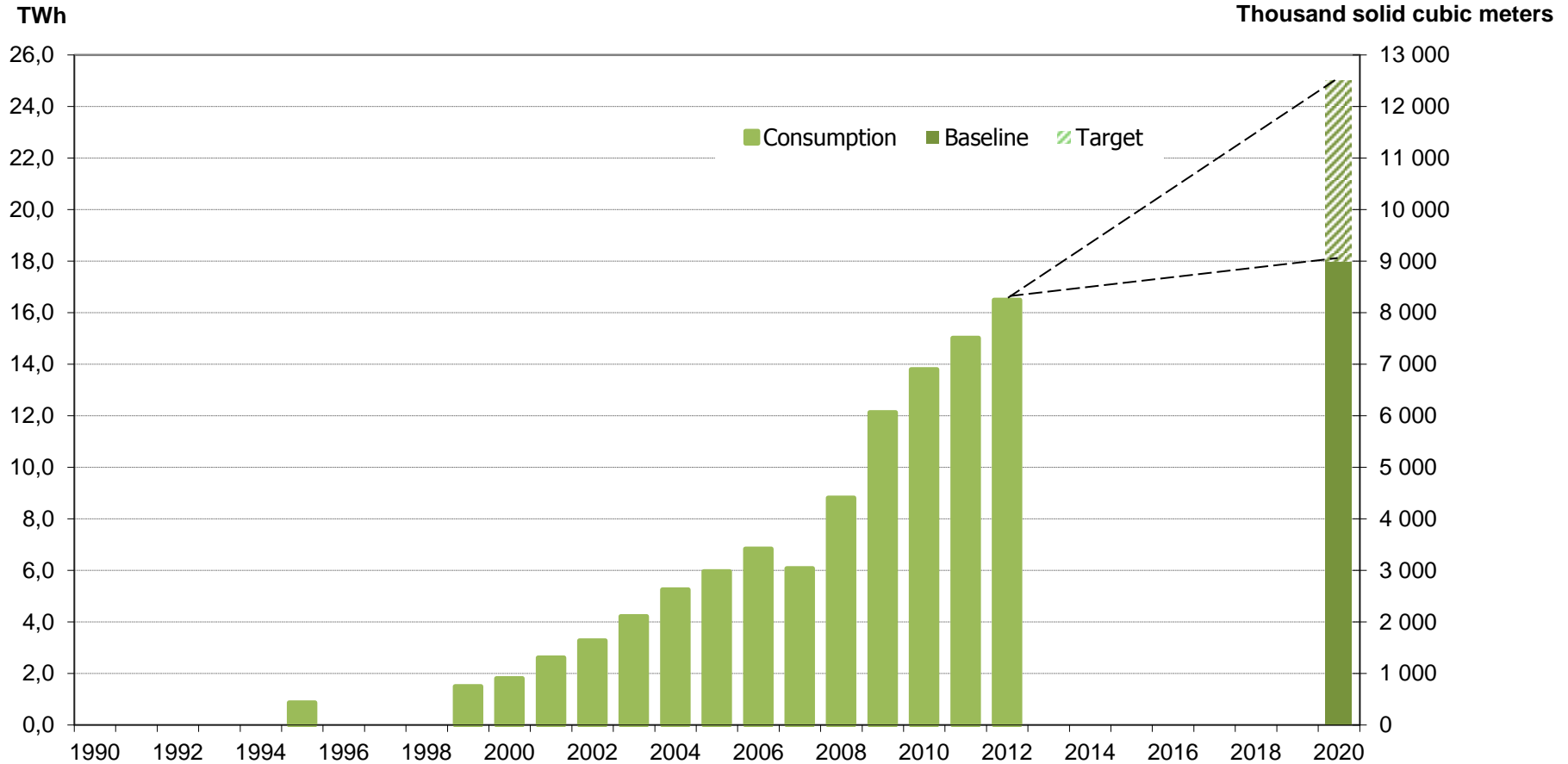
1990-1998 includes forest chips. Data source changed in 1999. Based on a sample survey, 1994-1998 data has been corrected to correspond better with post-1999 data.

Sources: Statistics Finland, Energy statistics 1991-2013 (years 1990-2012)

Package of obligations concerning renewable energy, 20.4.2010 (target)



Forest Chips

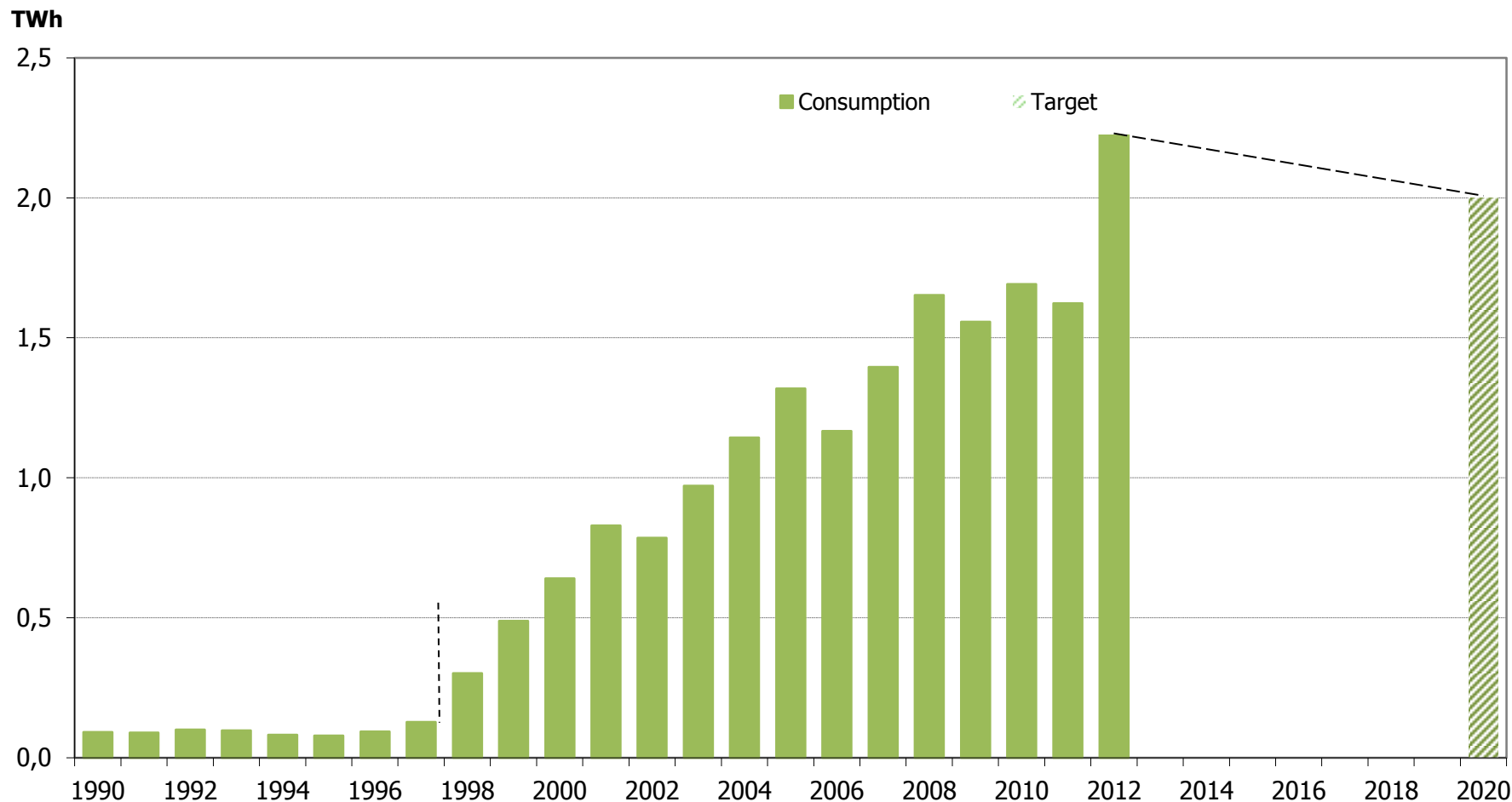


In addition to this target, wood chips are planned to be used as raw material in biorefineries.

- Sources: Statistics Finland, Energy statistics 1991-2013 (years 1990-2012)
- Renewable Energy Action Plan 2003-2006, KTM 5/2003 (year 1995)
- Long-term climate and energy strategy, VNS 11/2008 (baseline)
- Package of obligations concerning renewable energy, 20.4.2010 (target)



Recovered Fuels



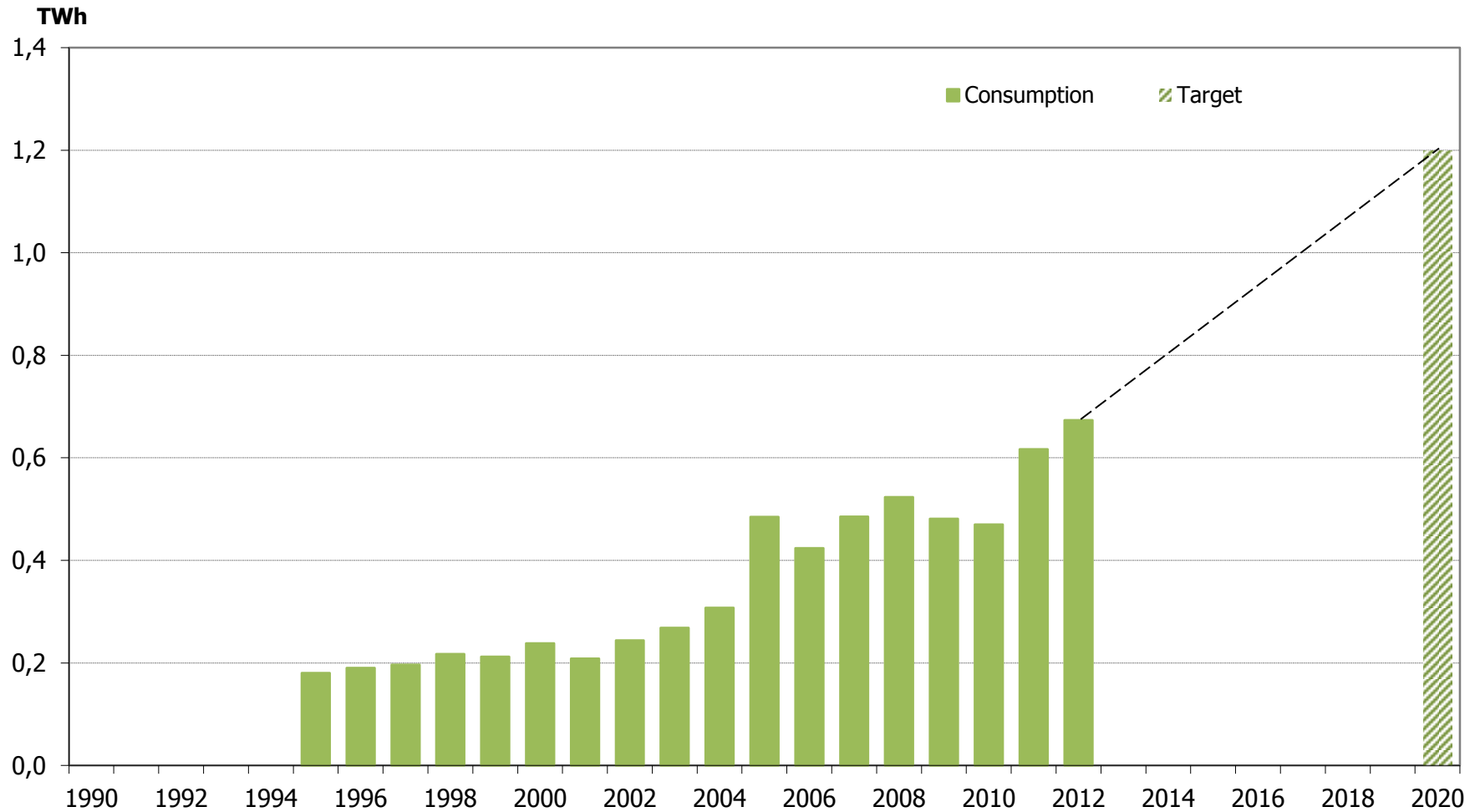
Information on all recovered fuels was not available before 1998.

Sources: Statistics Finland, Energy statistics 1991-2013 (years 1990-2012)

Package of obligations concerning renewable energy, 20.4.2010



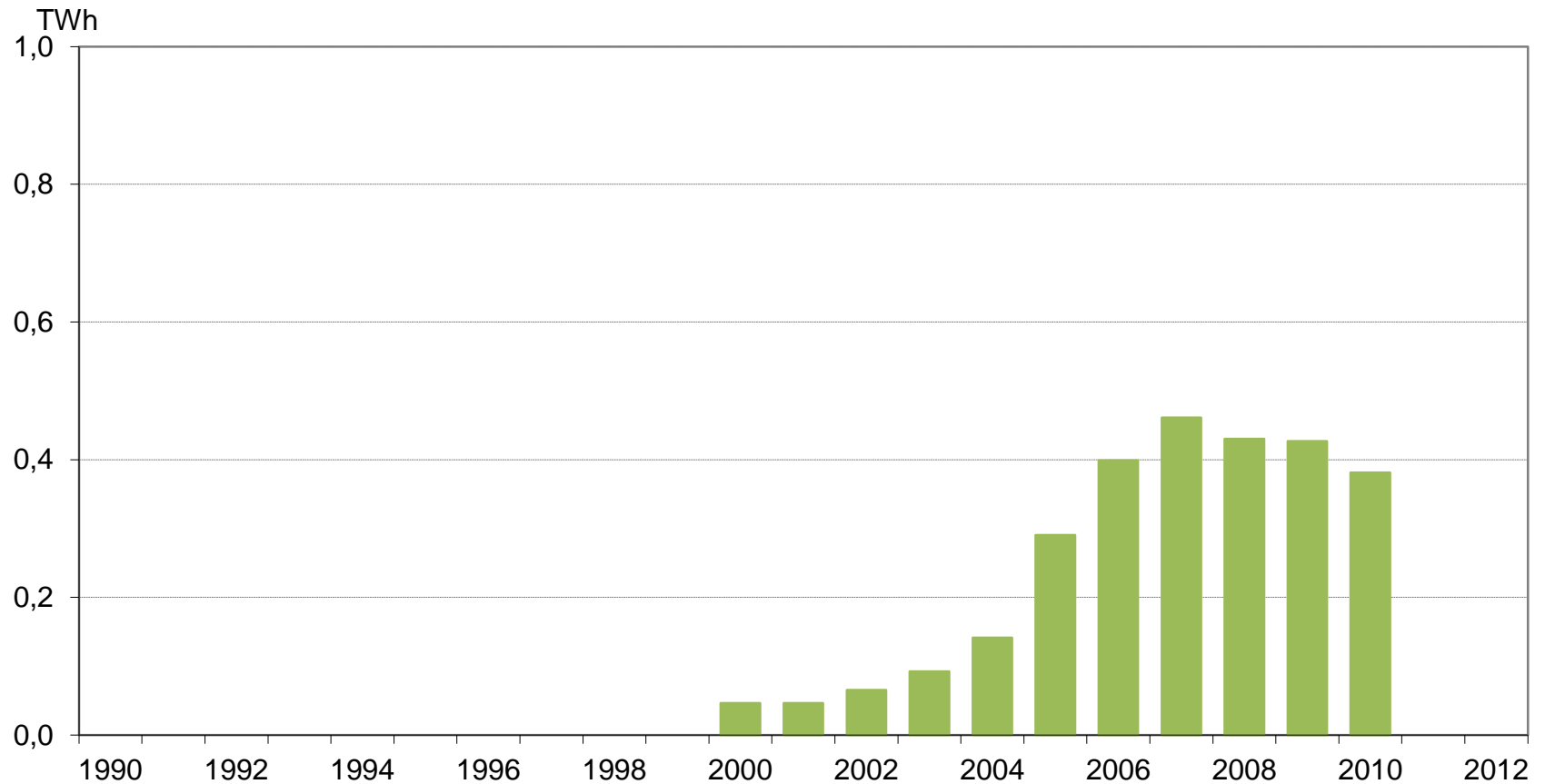
Biogas



Sources: Statistics Finland, Energy statistics 1996-2013 (years 1995-2012)
Package of obligations concerning renewable energy, 20.4.2010 (target)



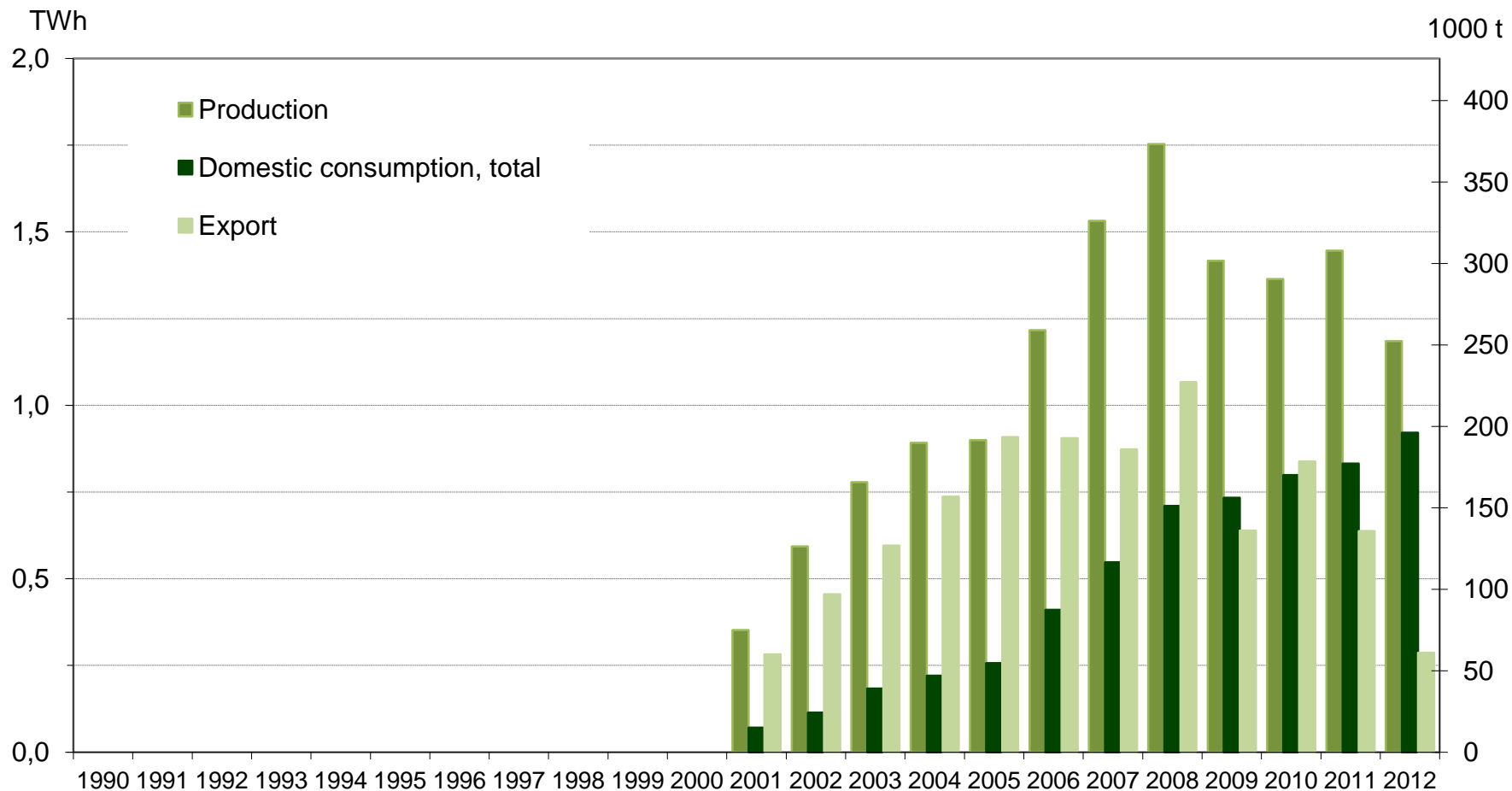
Agricultural Biomass



Sources: Vapo (years 2005-2012) , MTT (year 2004), PVO (year 2003), Finbio (years 2000-2002)



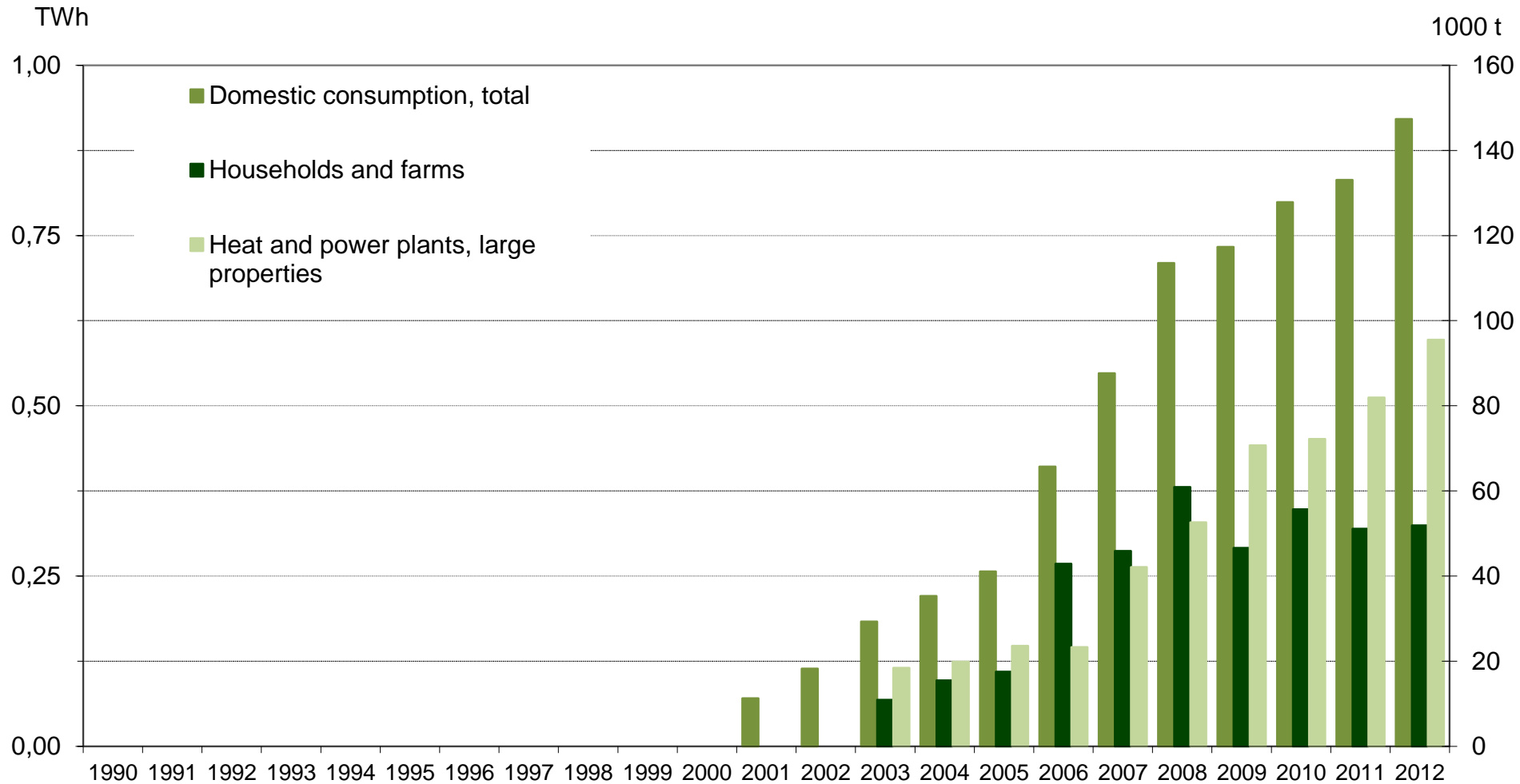
Wood Pellets – Exports, Domestic Consumption, Production (1000 t)



Sources: Statistics Finland, Energy statistics 2002-2012 (years 2001-2011)



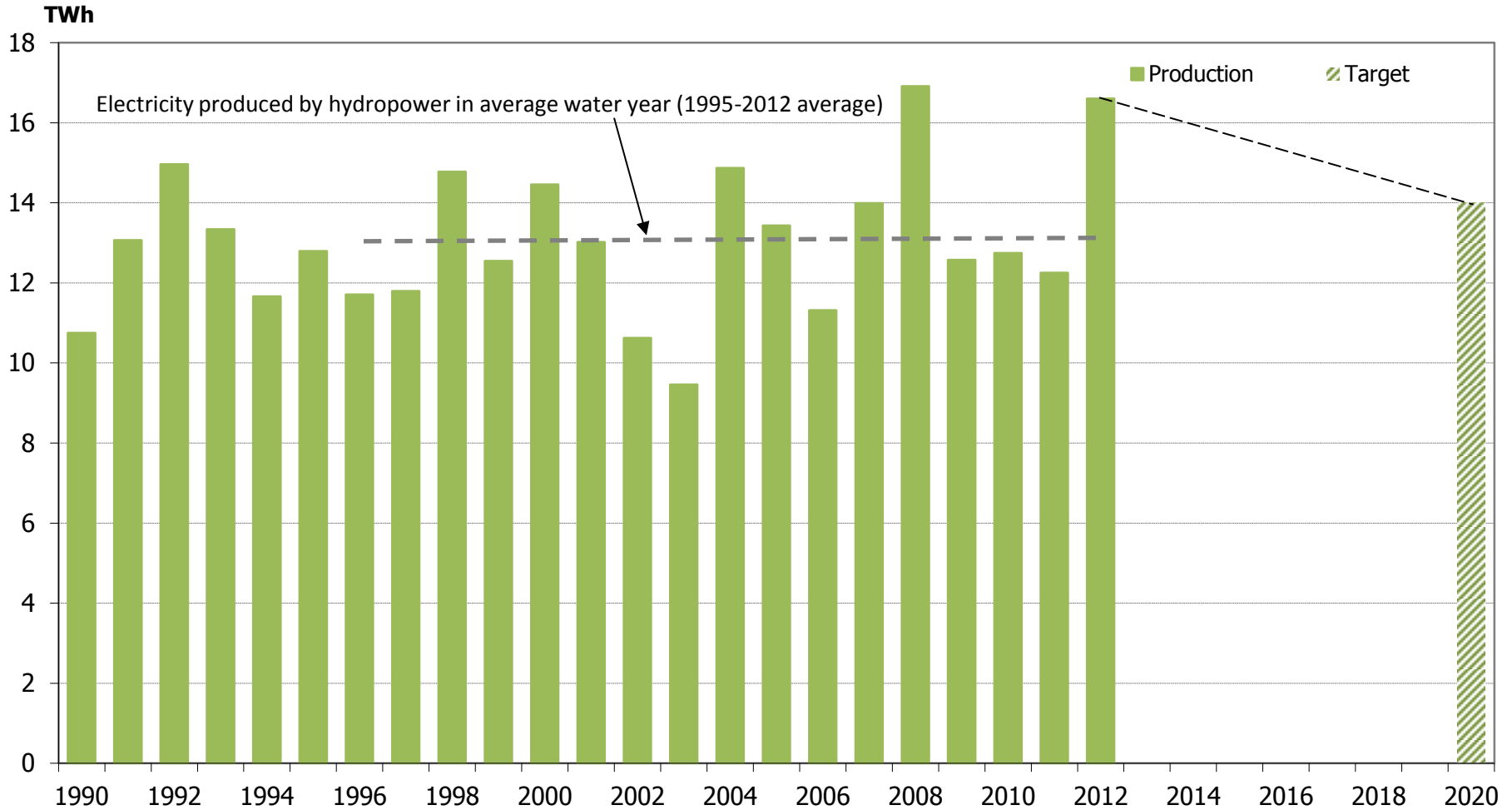
Wood Pellets – Domestic Consumption



Sources: Statistics Finland, Energy statistics 2002–2013 (years 2001–2012)



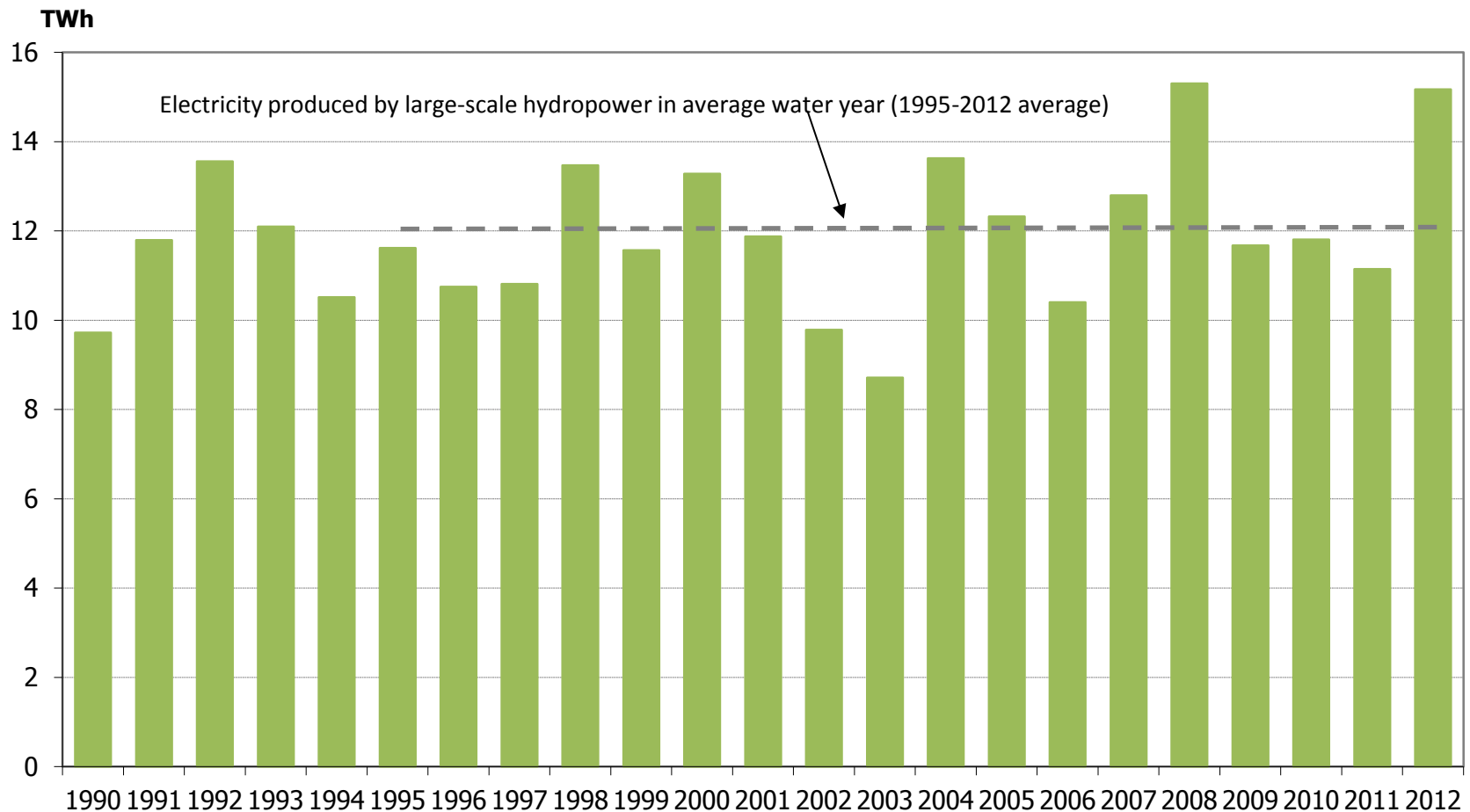
Electricity Produced by Hydropower, Total



Sources: Statistics Finland, Energy statistics 1991-2012 (years 1990-2011)
Package of obligations concerning renewable energy, 20.4.2010 (target)



Electricity Produced by Large-Scale Hydropower (>10 MW)

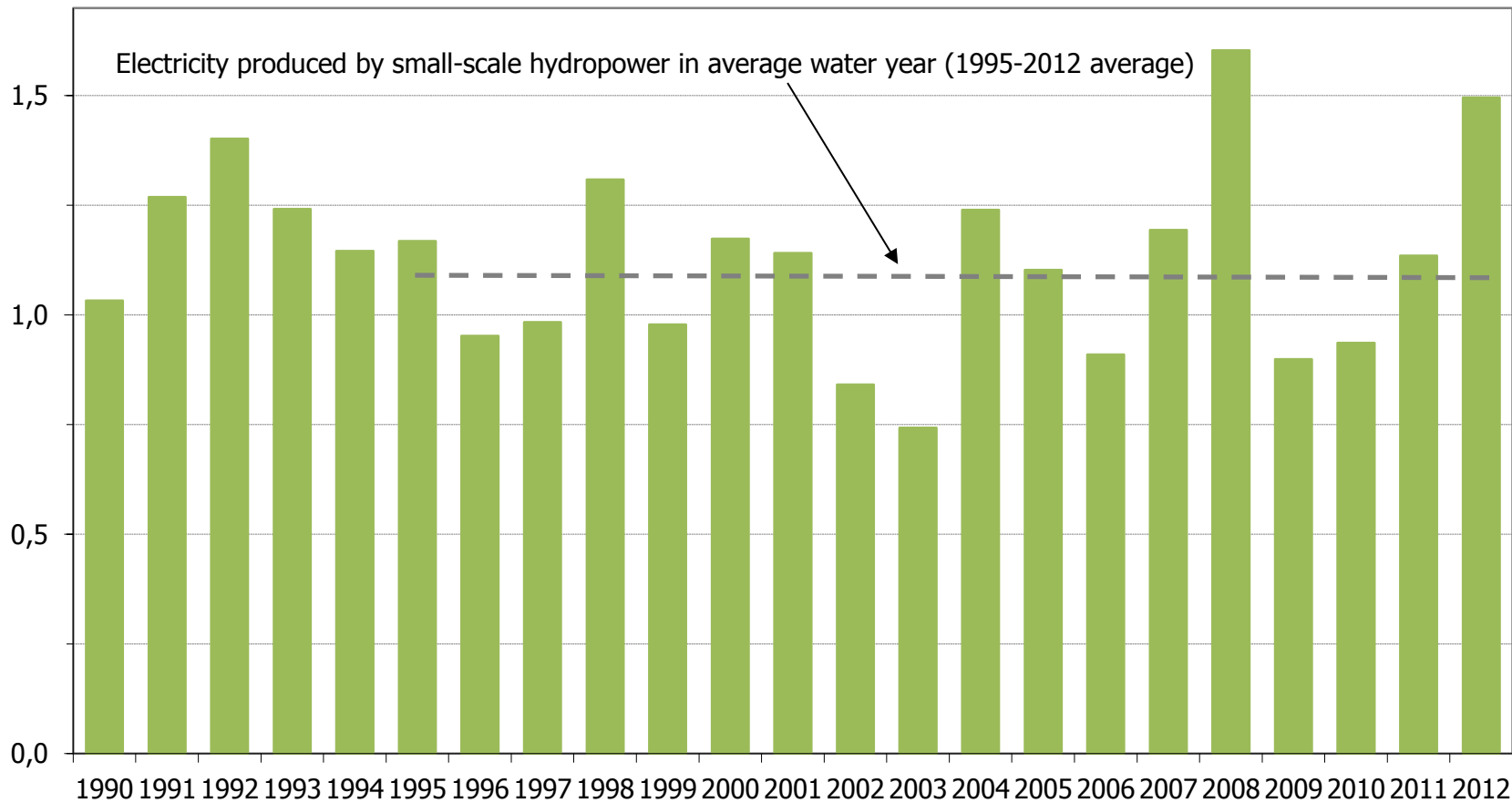


Sources: Statistics Finland, Energy statistics 1991-2013 (years 1990-2012)



Electricity Produced by Small-Scale Hydropower, (<10 MW)

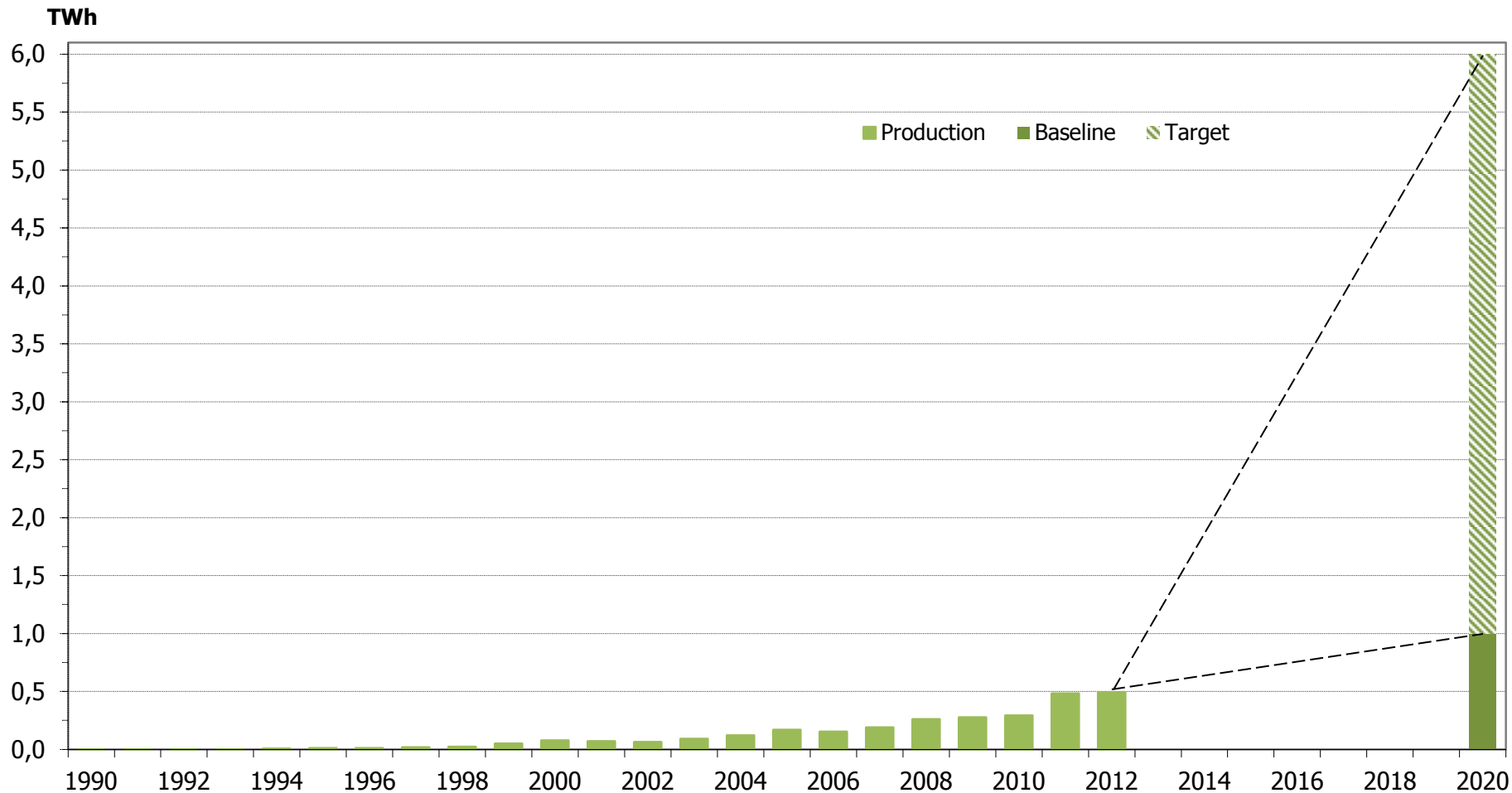
TWh



Sources: Statistics Finland, Energy statistics 1991-2013 (years 1990-2012)



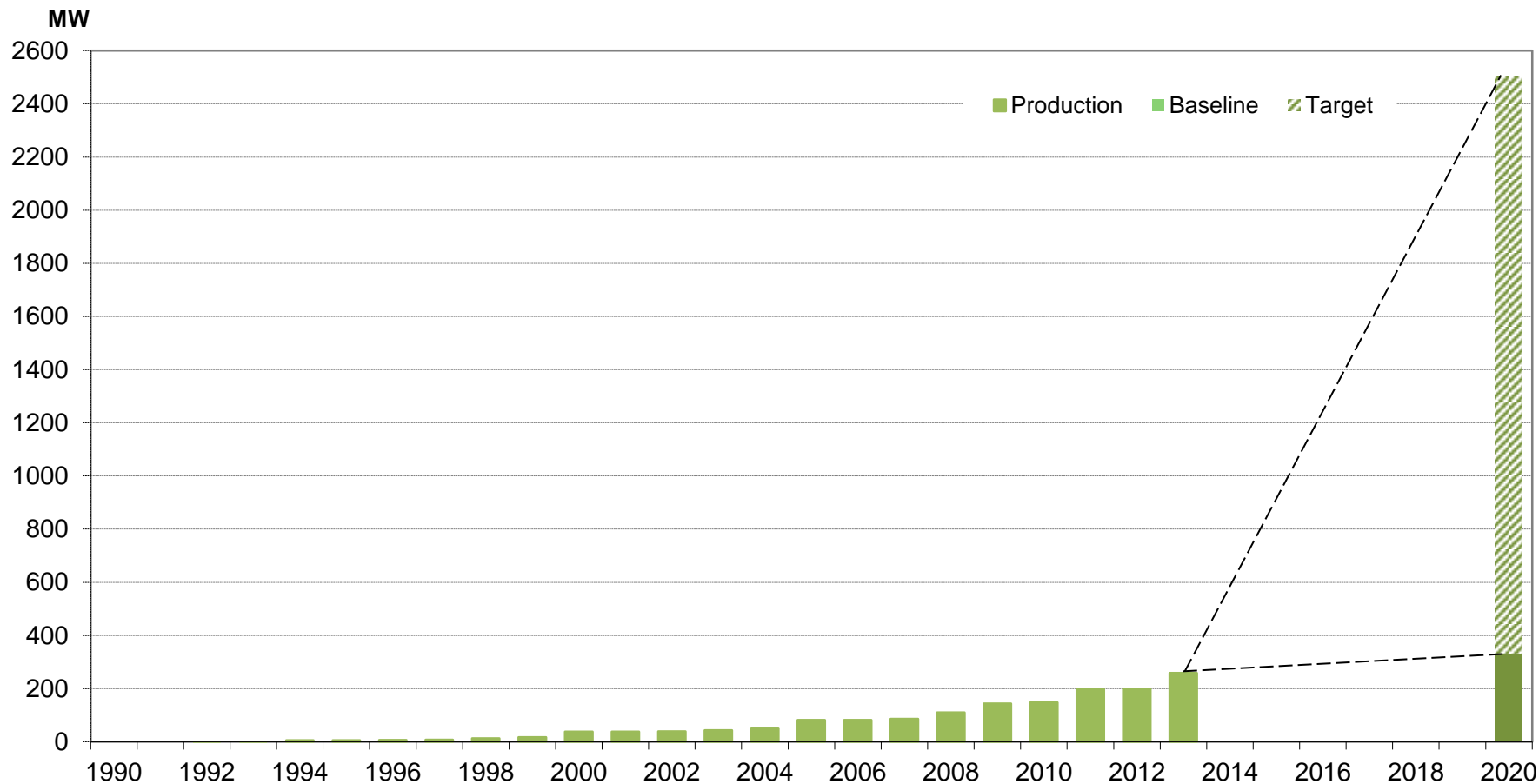
Wind Power Generation



Sources: Statistics Finland, Energy statistics 1991-2013 (years 1990-2012)
Long-term climate and energy strategy, VNS 11/2008 (baseline)
Package of obligations concerning renewable energy, 20.4.2010 (target)



Wind Power Capacity, MW



Capacity is calculated in the beginning of each year.

Sources: Statistics Finland, Energy statistics 1991–2013 (years 1990–2013)

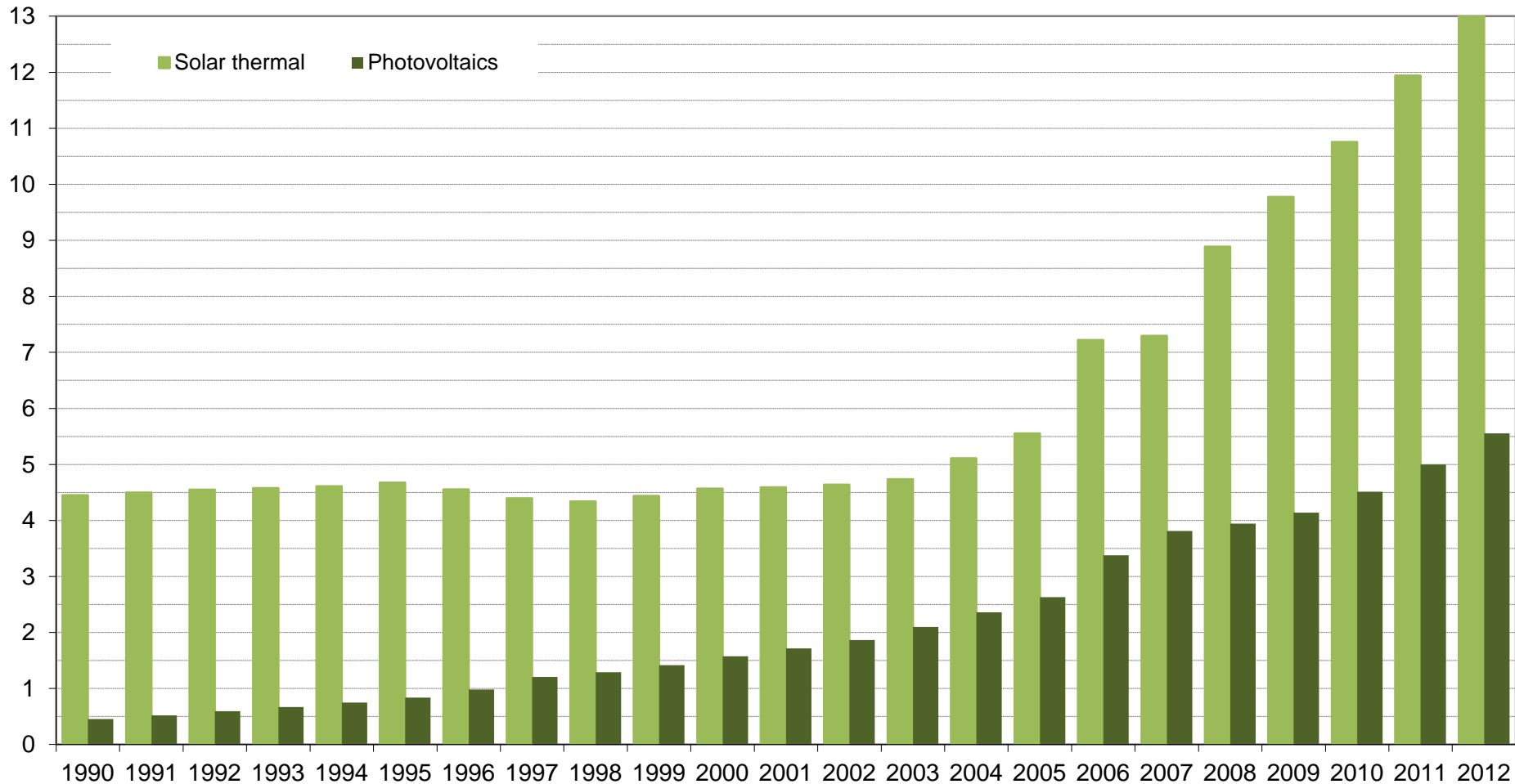
Long-term climate and energy strategy, VNS 11/2008 (baseline)

Package of obligations concerning renewable energy, 20.4.2010 (target)



Solar Thermal and Photovoltaics

GWh

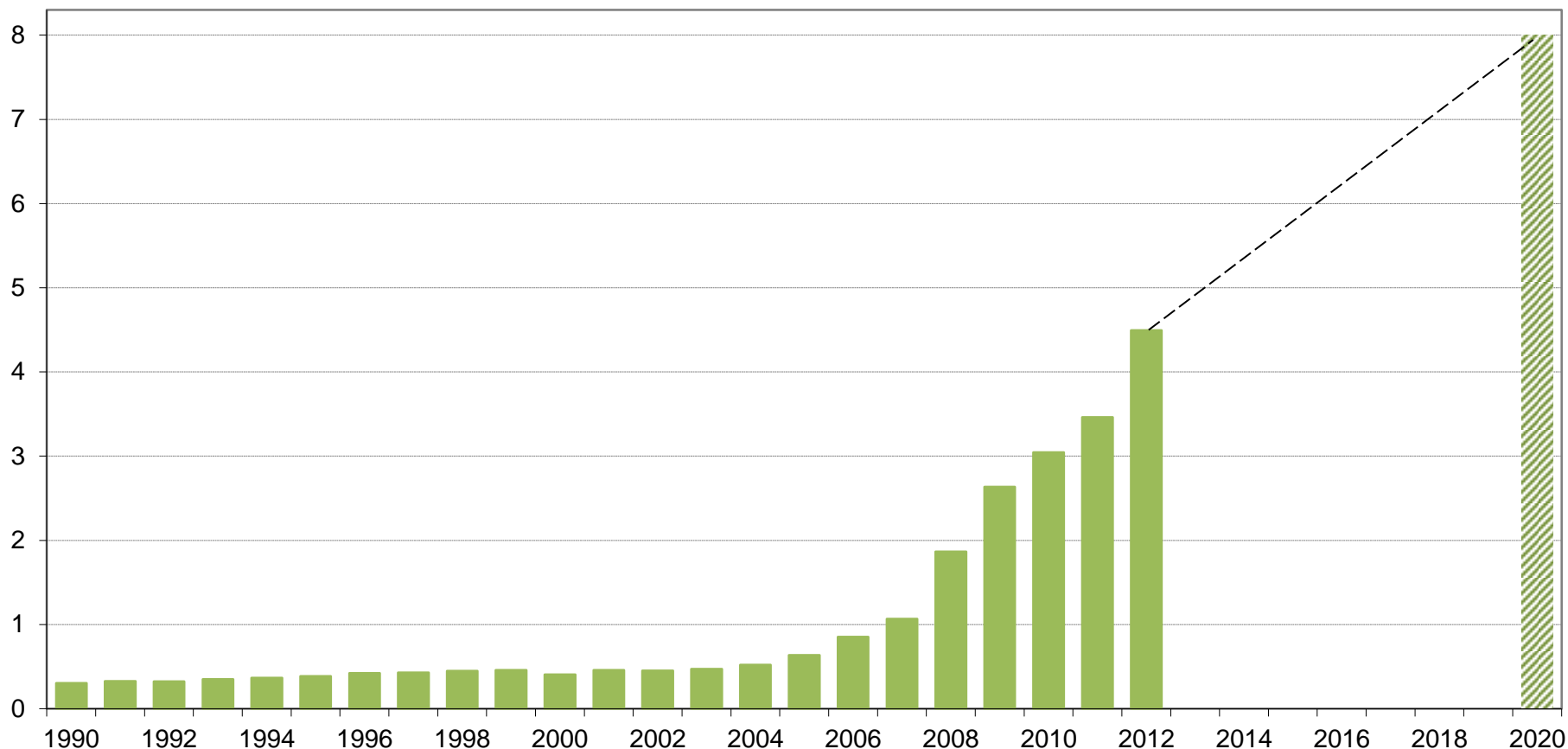


Source: Statistics Finland, Energy statistics 1991-2013 (years 1990-2012)



Heat Pumps

TWh

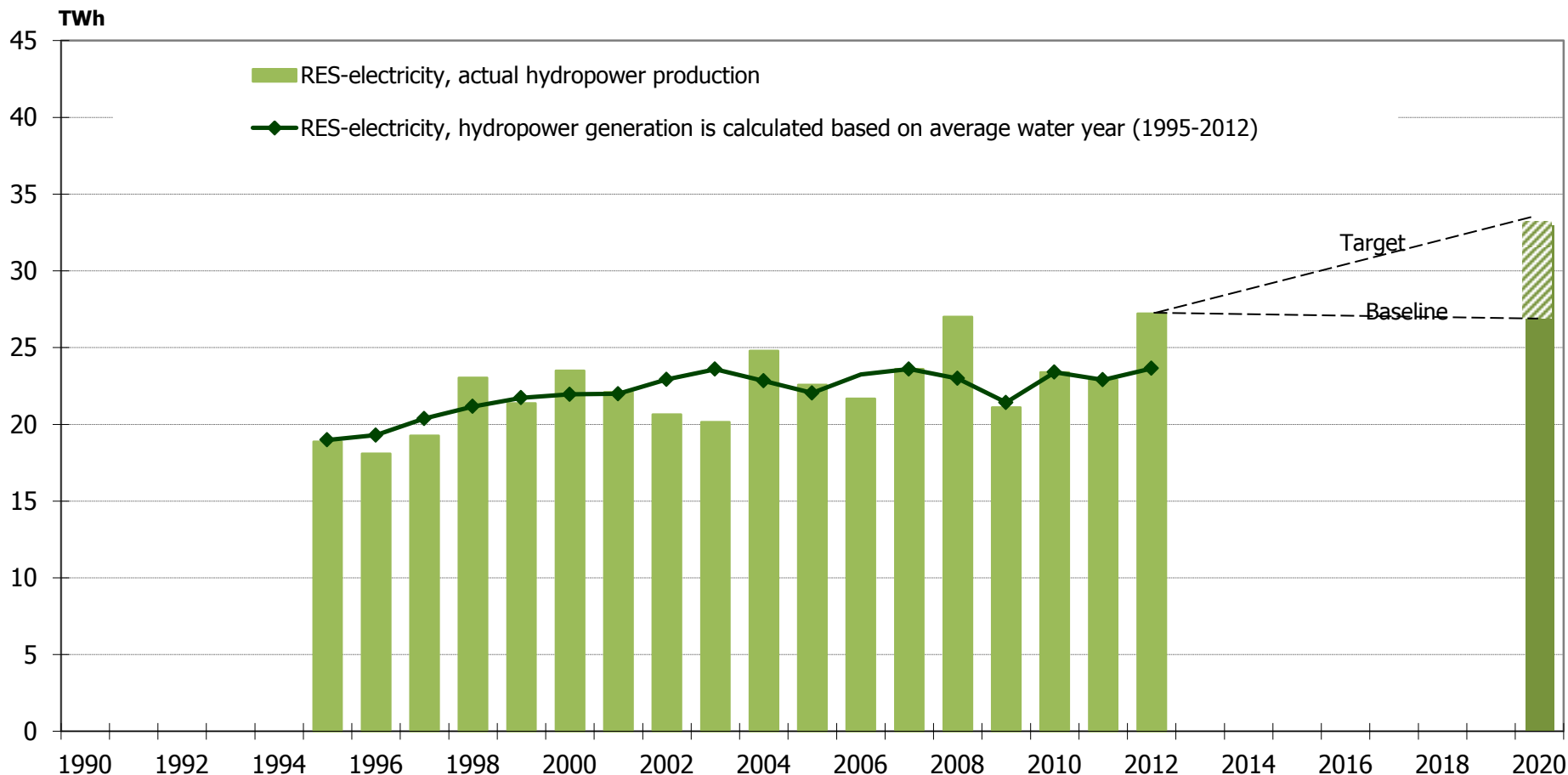


Includes heat produced by ground and air source heat pumps. Electricity, which is used to operate pumps, is subtracted from the figures.

Sources: Statistics Finland, Energy statistics 1991–2013 (years 1990–2012)
Package of obligations concerning renewable energy, 20.4.2010 (target)



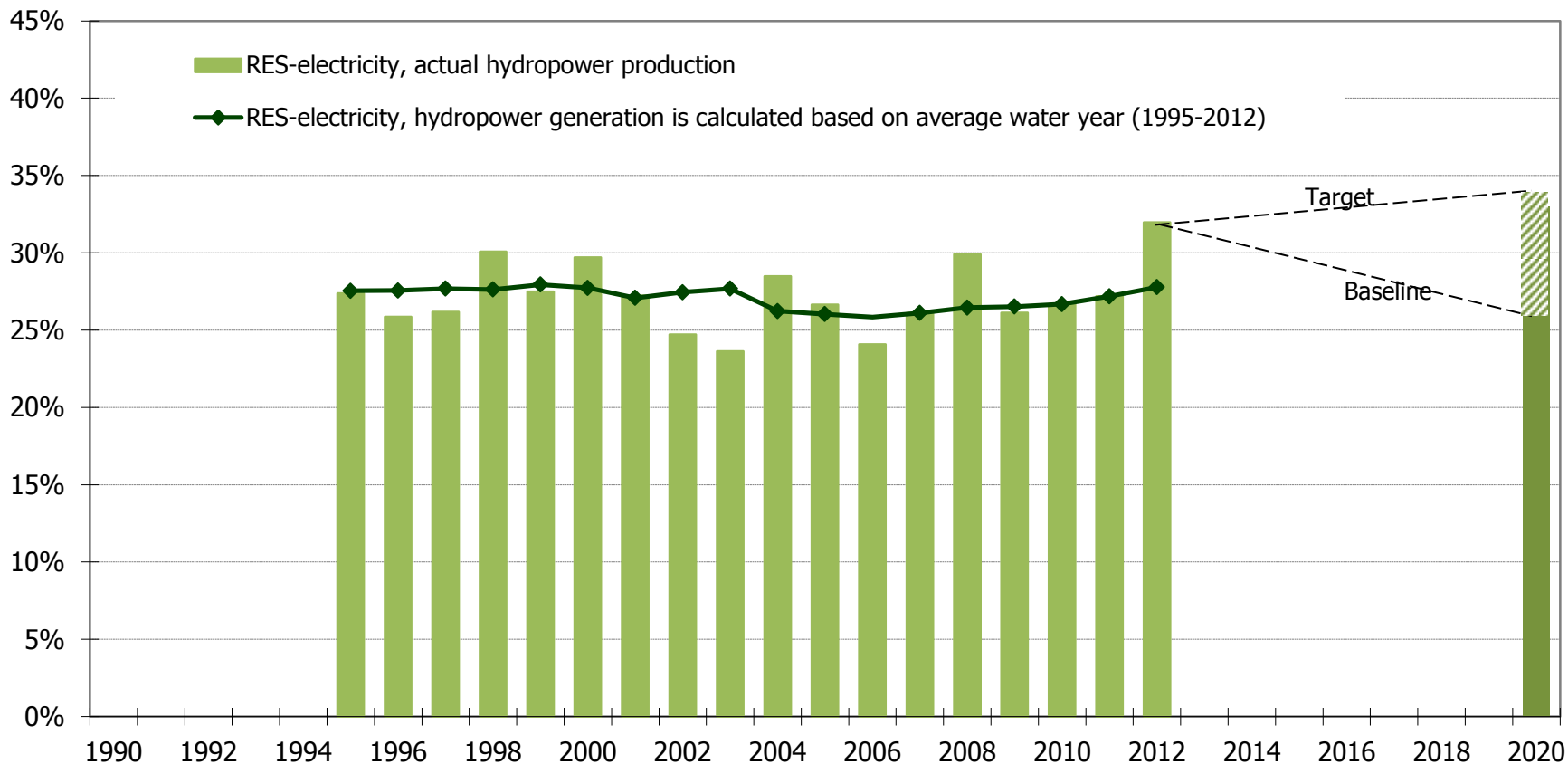
RES-Electricity, Total



Sources: Statistics Finland, Energy statistics 1996-2013 (years 1995-2012)
 Finnish energy industries (ET), Energy year - Electricity 2008, 2009, 2010, 2011 and 2012
 (years 2008-2012)
 Long-term climate and energy strategy, VNS 11/2008 (baseline and target)



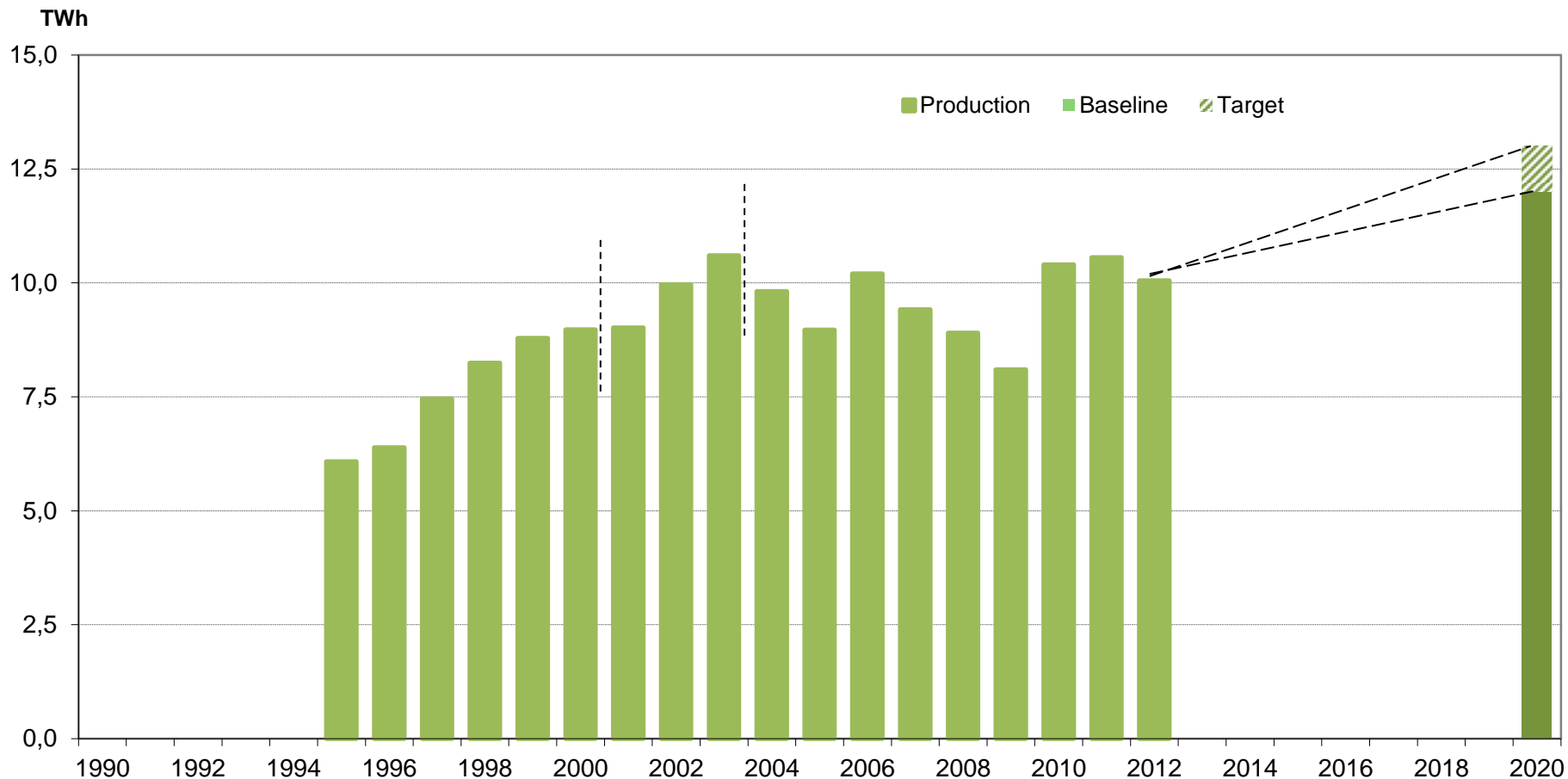
Share of RES-Electricity of Total Electricity Consumption



Sources: Statistics Finland, Energy statistics 1996-2013 (years 1995-2012)
 Finnish energy industries (ET),
 Energy year - Electricity 2008, 2009, 2010, 2011 and 2012 (years 2008-2012)
 Long-term climate and energy strategy, VNS 11/2008 (baseline and target)



Electricity Produced by Bioenergy



Sources: Statistics Finland, Energy statistics 1996-2001, 2005-2008 (years 1995-2000 and 2004-2007)

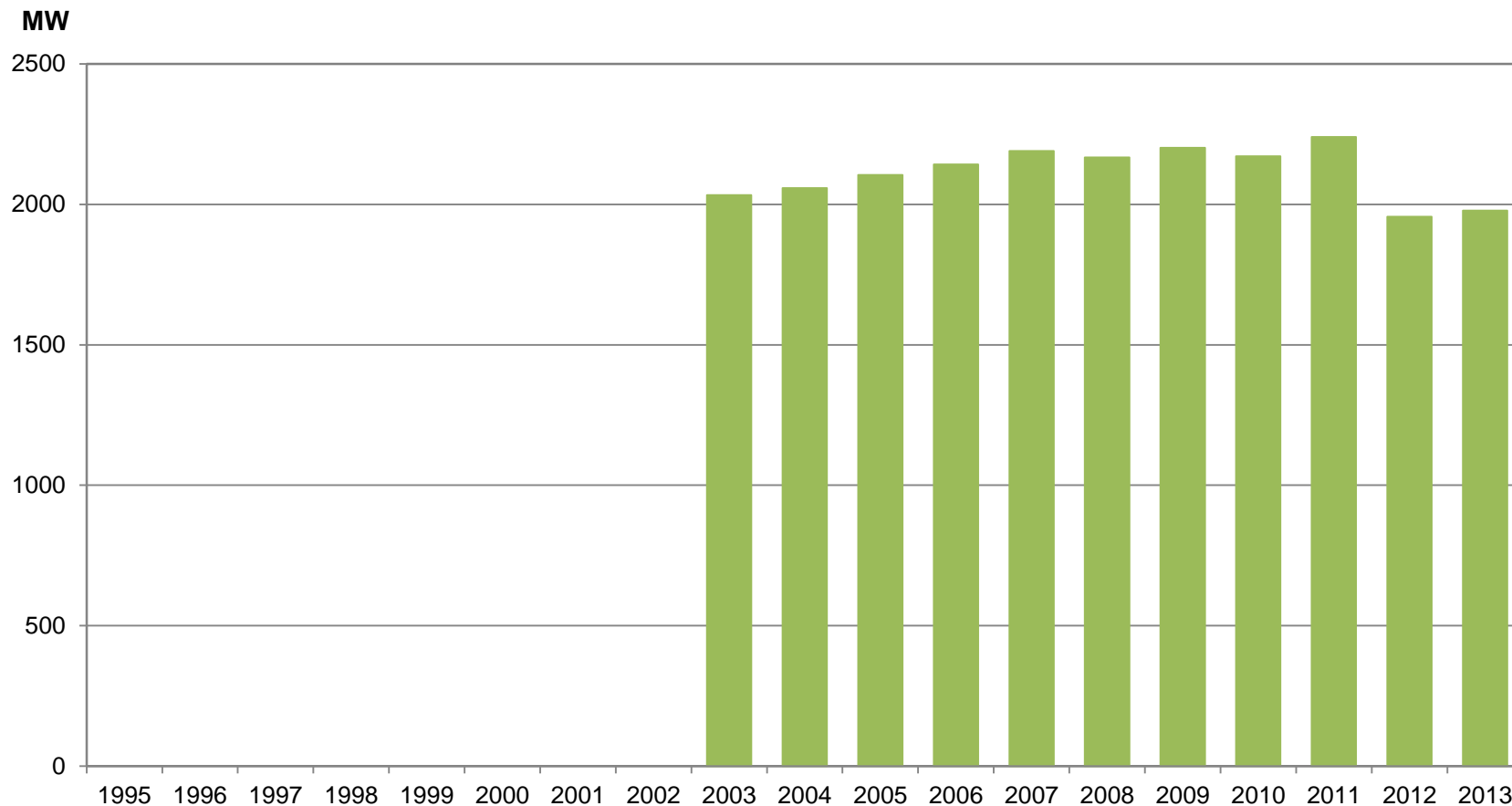
Adato Energia (years 2001-2003)

Finnish energy industries (ET), Energy year - Electricity 2008, 2009, 2010, 2011 and 2012 (years 2008-2012)

Long-term climate and energy strategy, VNS 11/2008 (baseline and target)



Electricity production capacity with bioenergy, MW



Statistics have not been compiled before year 2003. Capacity is calculated in the beginning of each year.
Source: Statistics Finland, Energy statistics 2008-2013





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