
FRAUNHOFER INSTITUTE FOR SOLAR ENERGY SYSTEMS ISE

Electricity production from solar and wind in Germany in 2013



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Facts to the electricity production in Germany in 2013

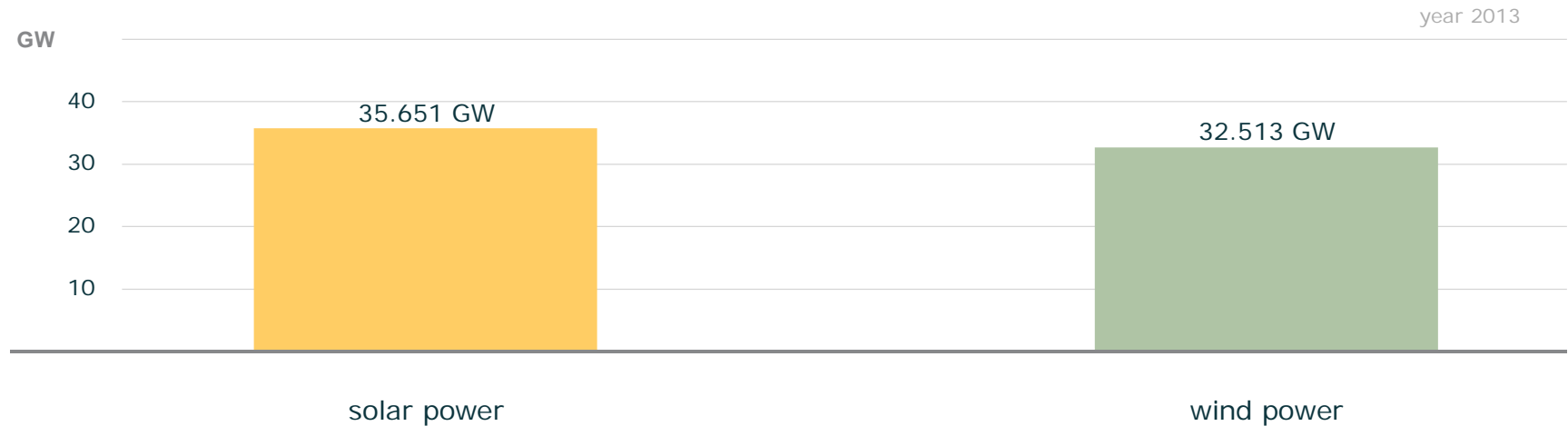
- Germany reached a new record in export surplus of 31.4 TWh. This is 36% more than in the last record year 2012 (23.1 TWh).
- Gross inland consumption is about 596 TWh. Subtracting the self consumption of conventional power plants from, we get about 560 TWh for the net electricity consumption, the network losses and the consumption of pumped storage.
- Wind turbines generated about 47.2 TWh in 2013. They contributed 8.4% to the consumption of 560 TWh.
- Photovoltaic systems have generated about 29.7 TWh in 2013. They contributed 5.3% to the consumption of 560 TWh.
- Lignite power plants could produce about 2% more electricity despite slightly lower fuel use.
- Electricity generation from gas-fired power plants fell back significantly in 2013.

AGENDA

- Annual energies
- Monthly energies
- Weekly energies
- Daily energies
- Annual power curves
- Monthly power curves
- Weekly power curves
- Exemplary daily power curves

Installed power solar and wind at October 16, 2013

Installed solar and wind power

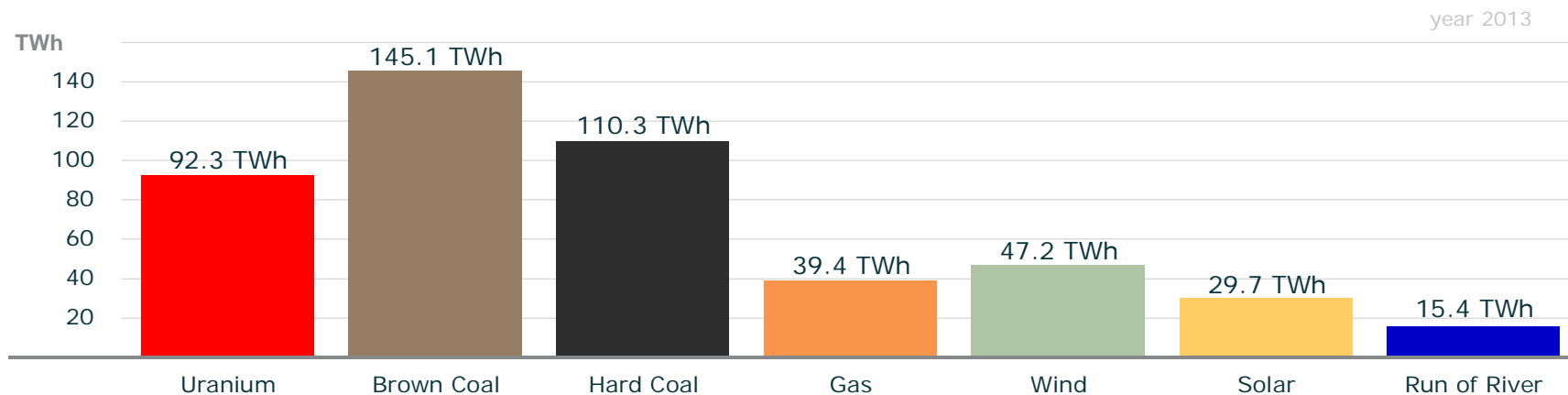


■ wind power: 32.005 GW onshore; 508 MW offshore

Graph: B. Burger, Fraunhofer ISE; data: Bundesnetzagentur

Electricity production in 2013

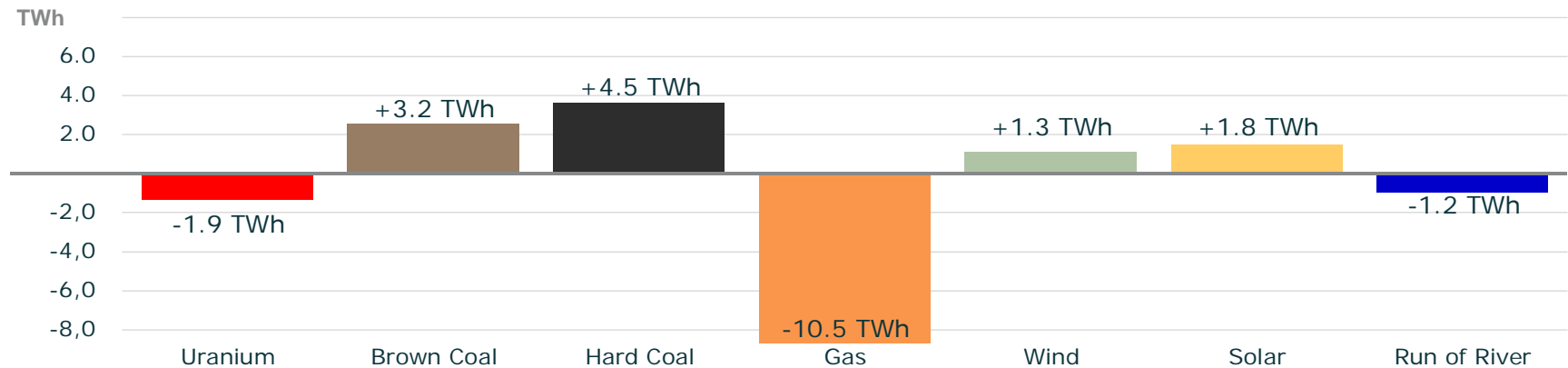
Electricity production in 2013



Graph: B. Burger, Fraunhofer ISE; data: European Stock Exchange EEX, energetic corrected values

Change in electricity production: 2013 versus 2012

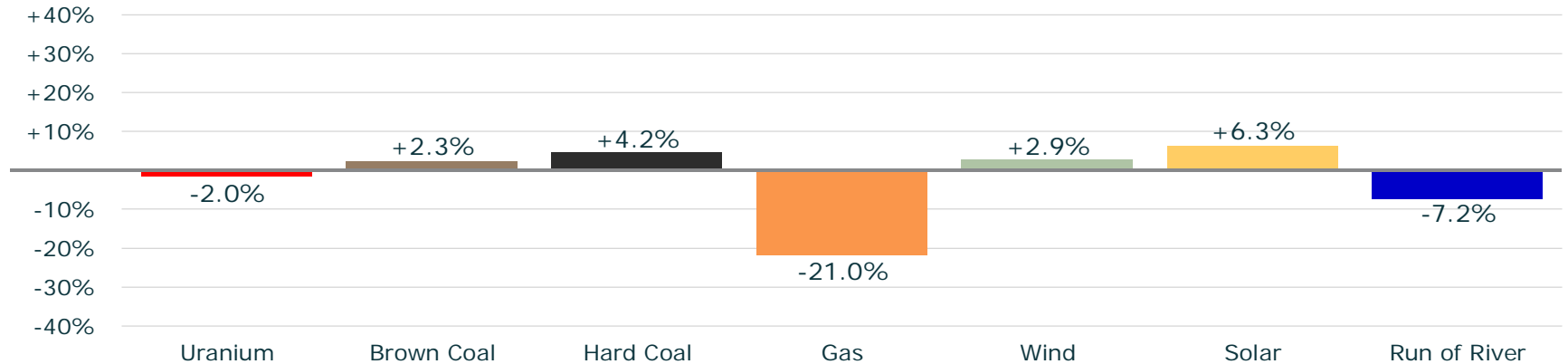
Change in electricity production: 2013 versus 2012



Graph: B. Burger, Fraunhofer ISE; data: Statistisches Bundesamt (2012), European Stock Exchange EEX (2013)

Relative change in electricity production: 2013 versus 2012

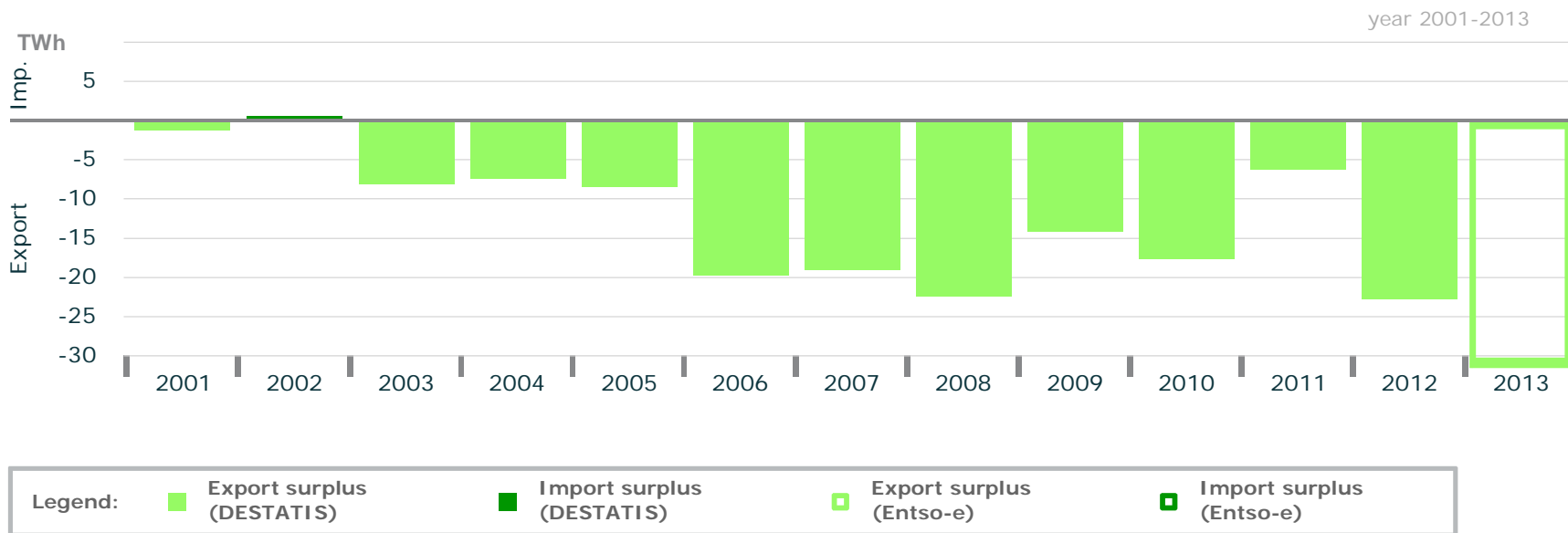
Relative change in electricity production: 2013 versus 2012



Graph: B. Burger, Fraunhofer ISE; data: Statistisches Bundesamt (2012), European Stock Exchange EEX (2013)

Export and import balance since 2001

Electricity Export and Import Balance



- Germany reached a new record in export surplus in 2012 with 23.1 TWh. The last record was in 2008 with 22.5 TWh export surplus.
- The export surplus in 2013 was approx. 31.4 TWh.

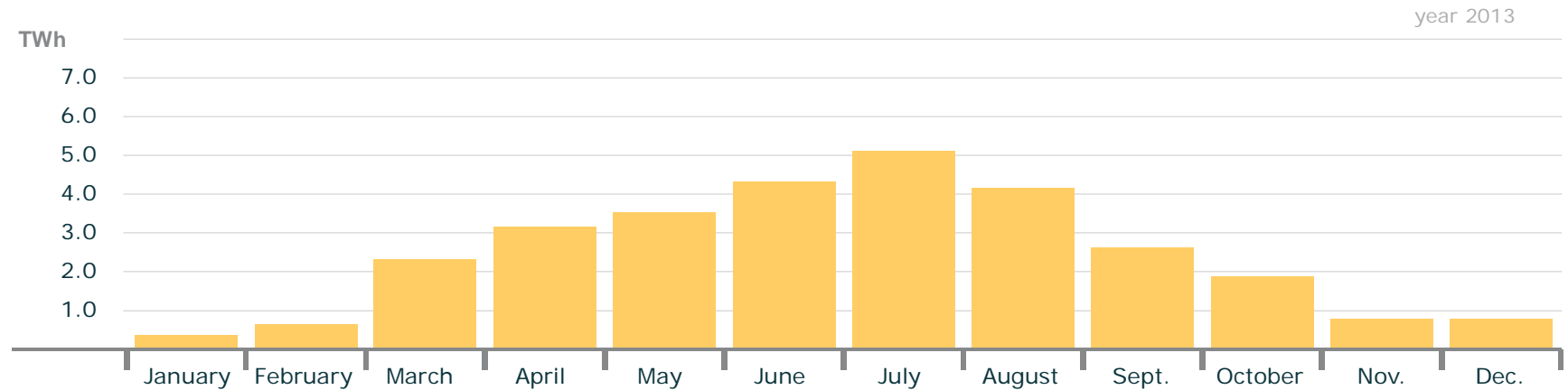
Graph: B. Burger, Fraunhofer ISE; Data: BMWi Energiedaten (-2011); DESTATIS (2012); Entso-e (2013, scaled values)

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Monthly Production Solar

Monthly Production Solar

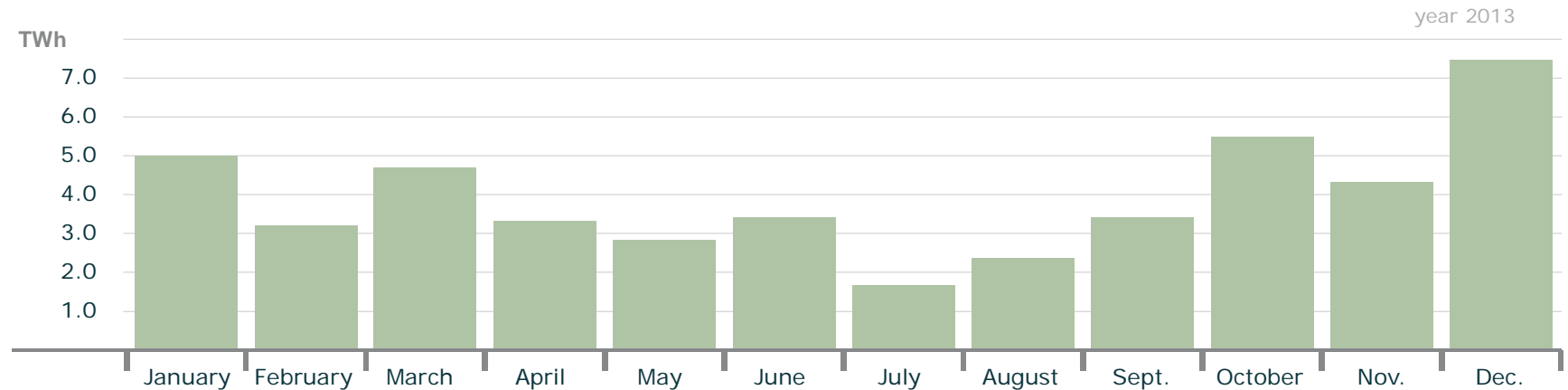


- The maximal production of PV was 5.1 TWh in July 2013
- The minimal production was 0.35 TWh in January 2013

Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Monthly Production Wind

Monthly Production Wind

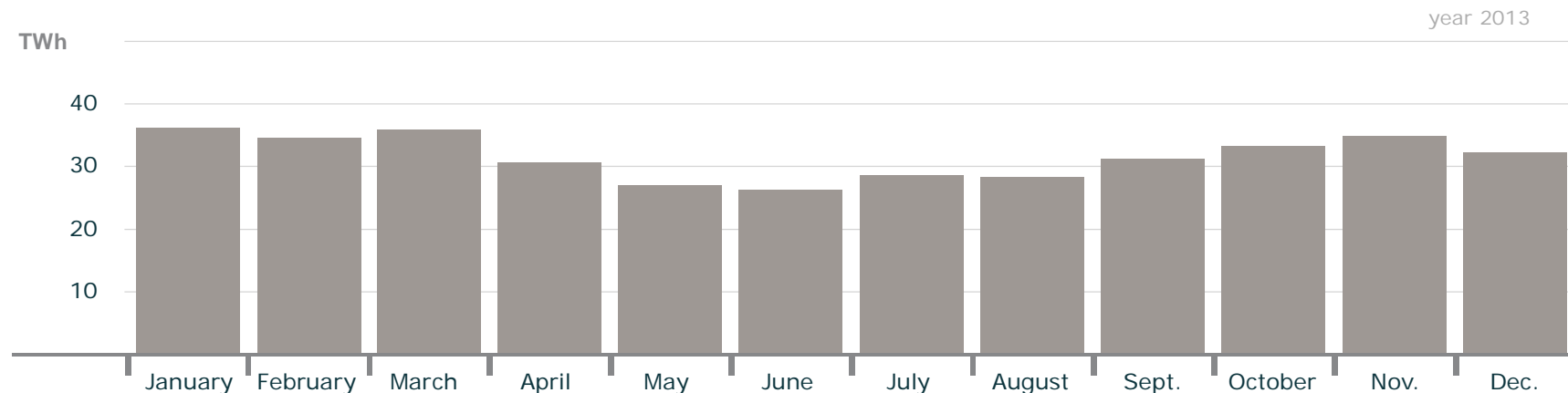


- The maximal production of wind was 7.5 TWh in December 2013
- The minimal production was 1.7 TWh in July 2013

Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Monthly Production Conventional > 100 MW

Monthly Production Conventional > 100 MW

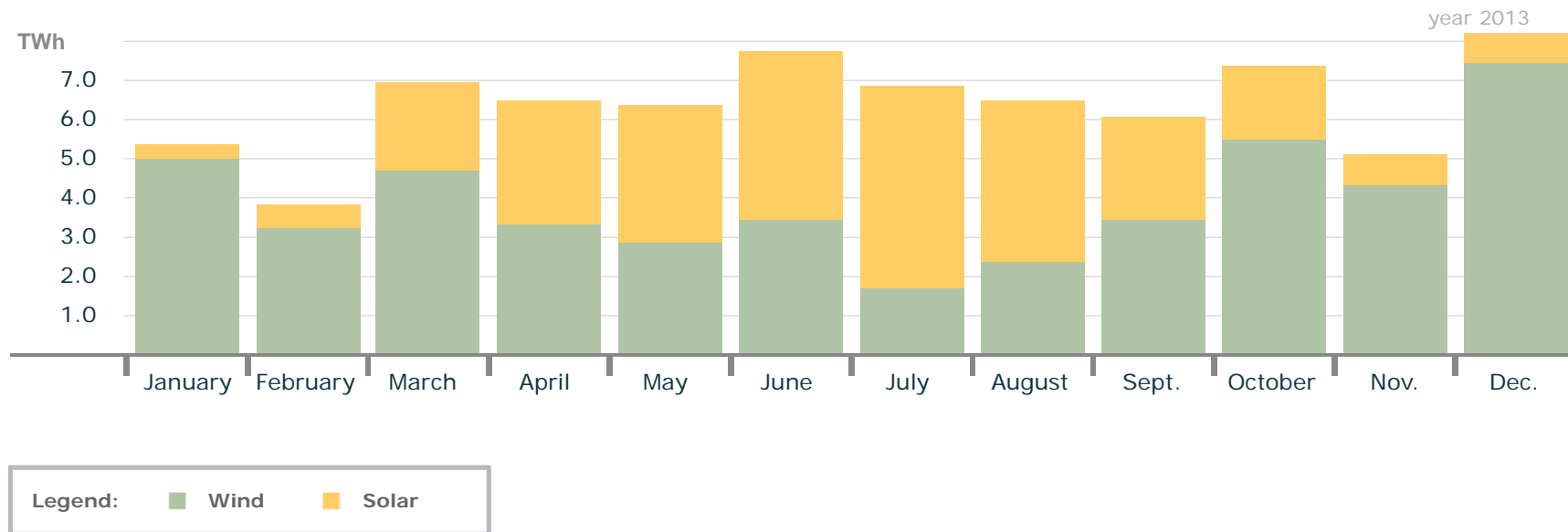


- The maximal production of conventional sources was 36.3 TWh in January 2013
- The minimal production was 26.4 TWh in June 2013

Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Monthly Production Solar and Wind

Monthly Production Solar and Wind

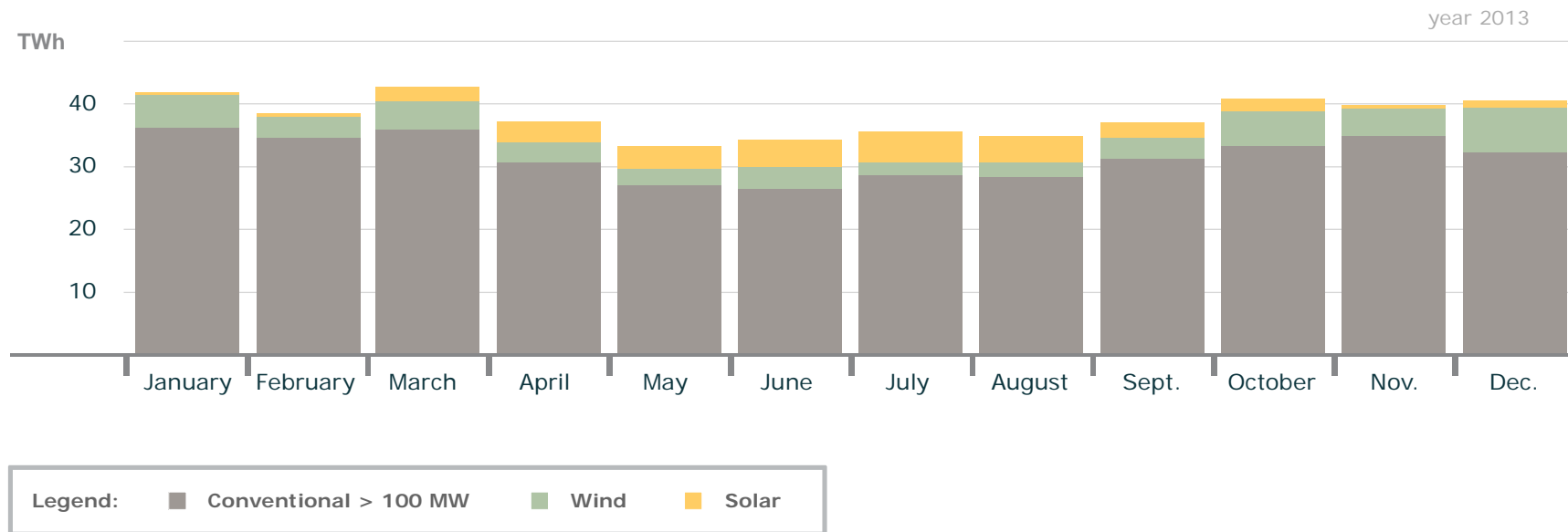


- The maximal sum of solar and wind production was 8.2 TWh in December 2013
- The minimal sum was 3.9 TWh in February 2013

Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Monthly Production Solar, Wind and Conventional

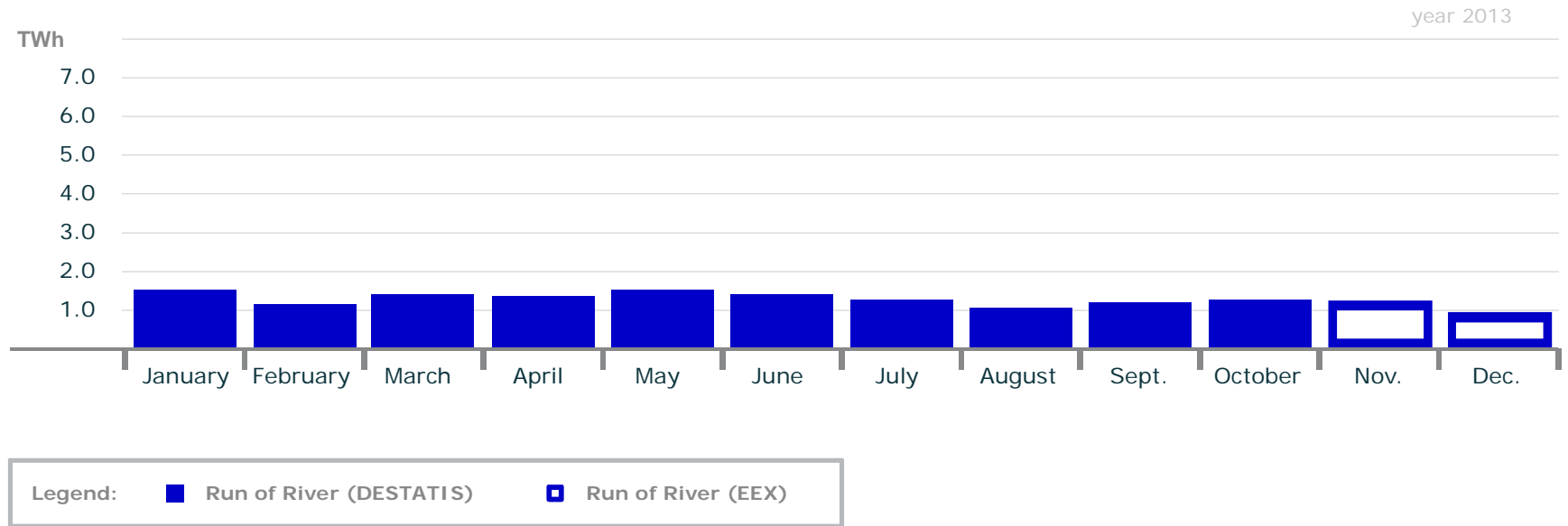
Monthly Production Solar, Wind and Conventional



Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Monthly Production Run of River

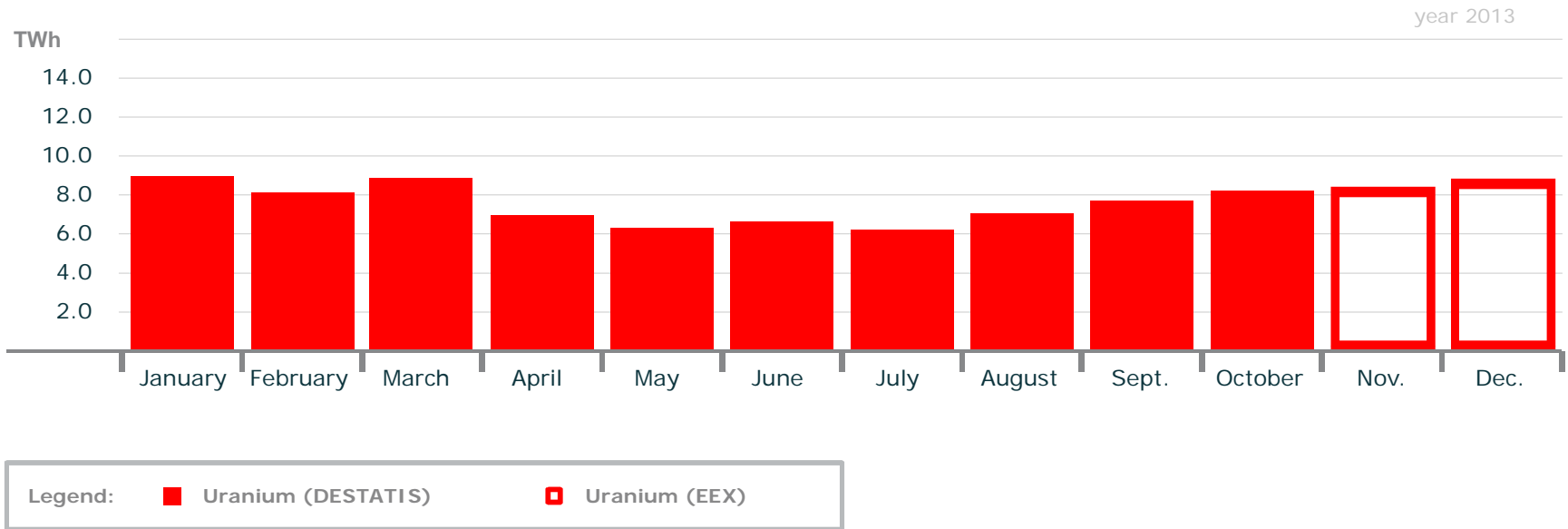
Monthly Production Run of River



Graph: B. Burger, Fraunhofer ISE; data: Statistisches Bundesamt (DESTATIS), European Stock Exchange (EEX)

Monthly Production Uranium

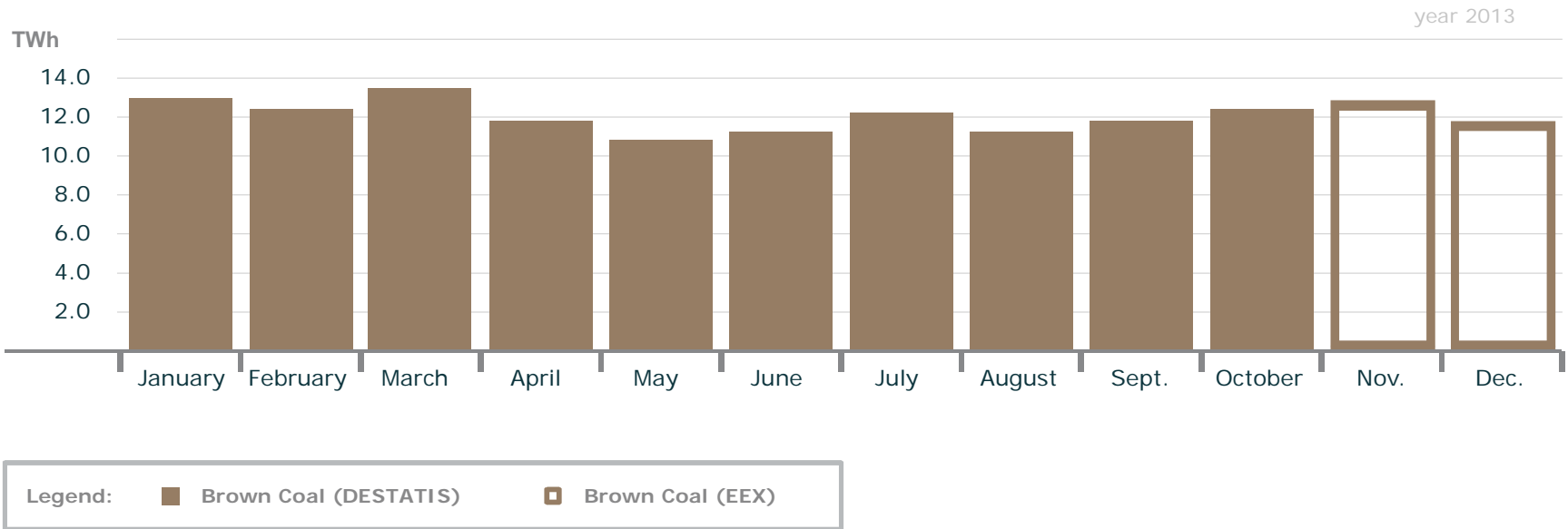
Monthly Production Uranium



Graph: B. Burger, Fraunhofer ISE; data: Statistisches Bundesamt (DESTATIS), European Stock Exchange (EEX)

Monthly Production Brown Coal

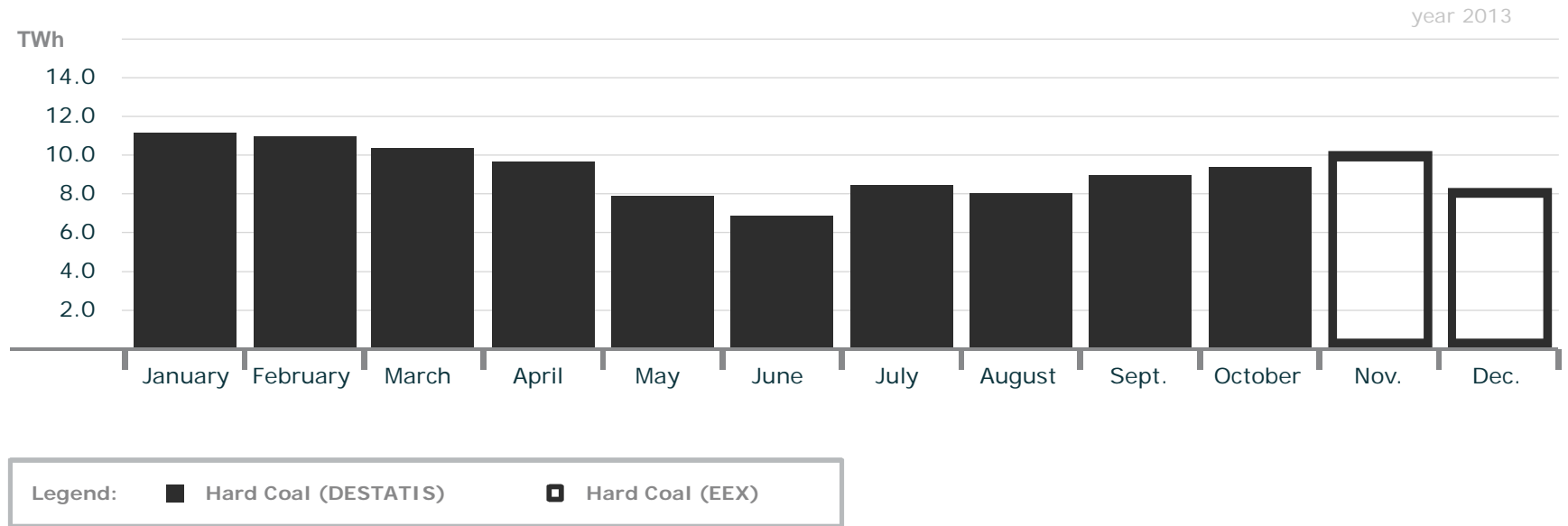
Monthly Production Brown Coal



Graph: B. Burger, Fraunhofer ISE; data: Statistisches Bundesamt (DESTATIS), European Stock Exchange (EEX)

Monthly Production Hard Coal

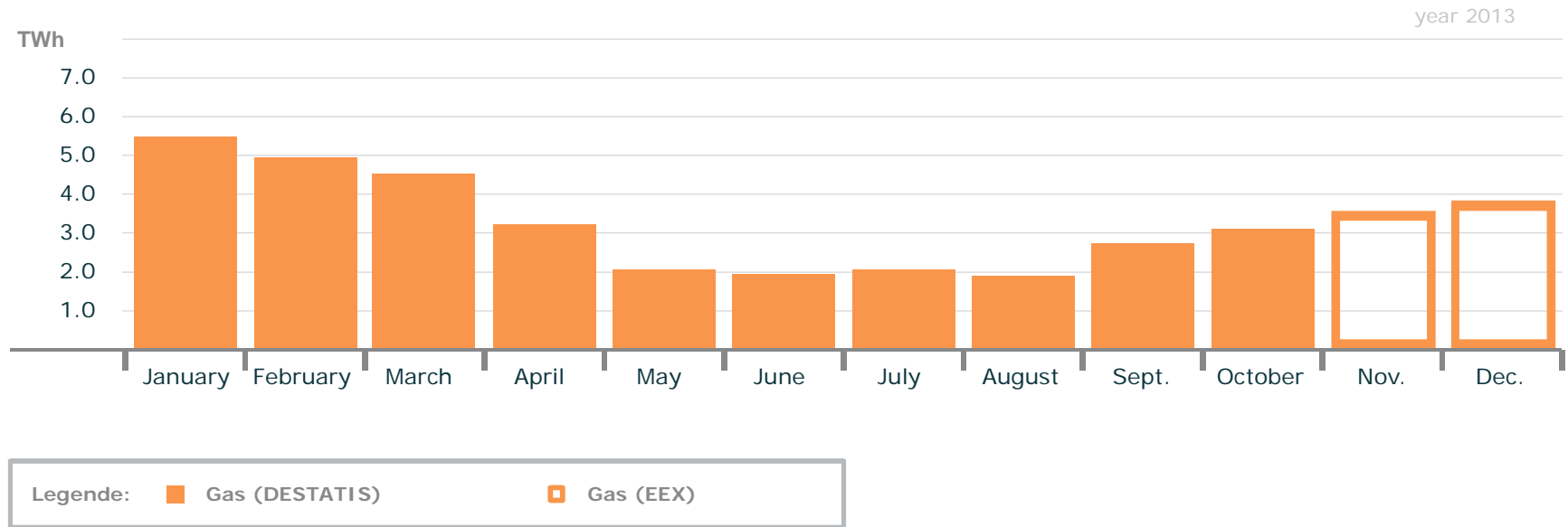
Monthly Production Hard Coal



Graph: B. Burger, Fraunhofer ISE; data: Statistisches Bundesamt (DESTATIS), European Stock Exchange (EEX)

Monthly Production Gas

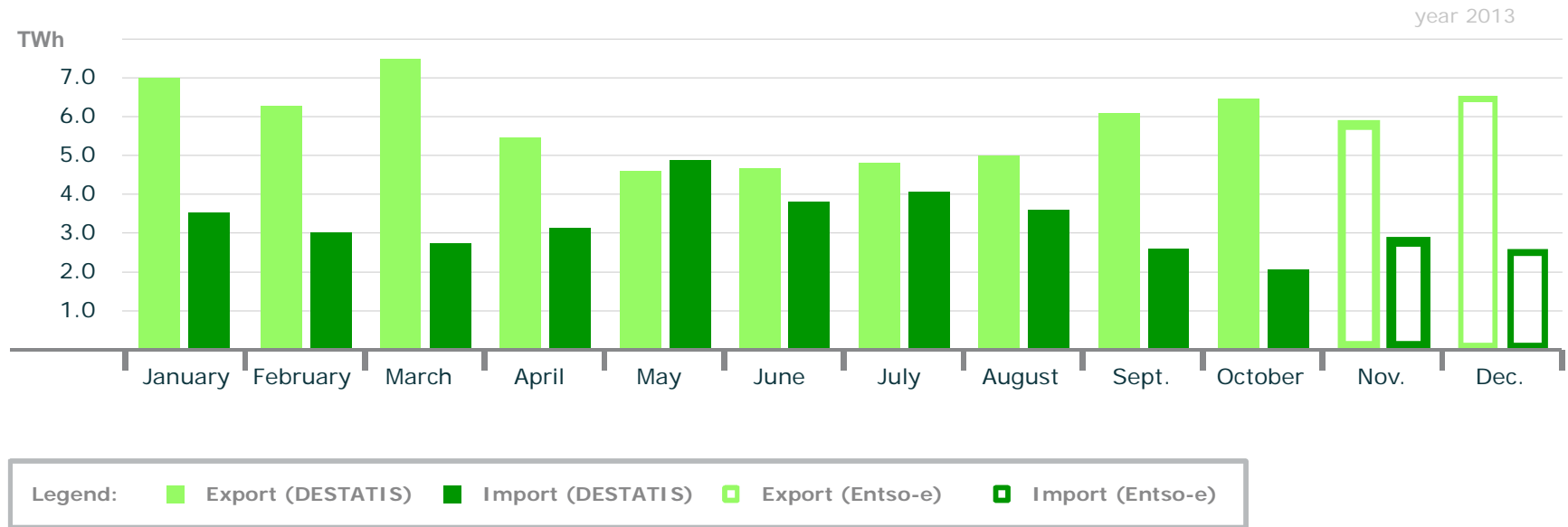
Monthly Production Gas



Graph: B. Burger, Fraunhofer ISE; data: Statistisches Bundesamt (DESTATIS), European Stock Exchange (EEX)

Electricity Export and Import

Electricity Export and Import

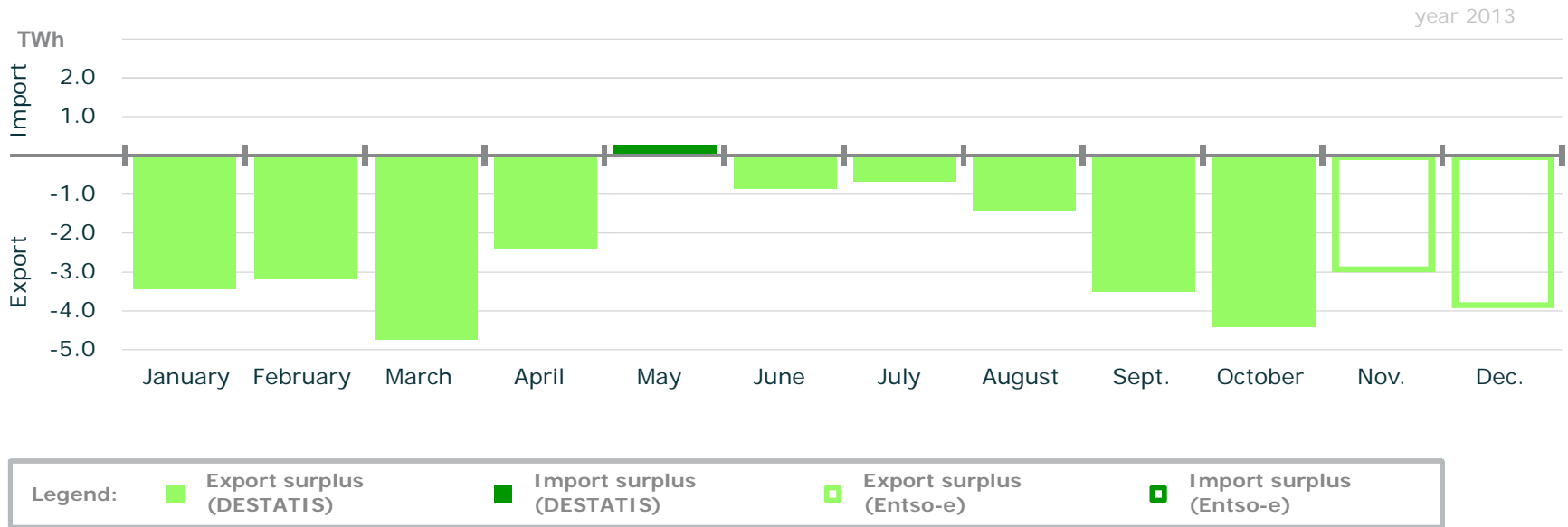


- In 2013 Germany exported approx. 70.4 TWh and imported approx. 38.9 TWh.

Graph: B. Burger, Fraunhofer ISE; data: Statistisches Bundesamt (DESTATIS); Entso-e

Export and Import Balance

Electricity Export and Import Balance



- The export surplus from January to October was 24.4 TWh (DESTATIS)
- The export surplus in 2013 was approx. 31.4 TWh (DESTATIS and Entso-e, scaled)

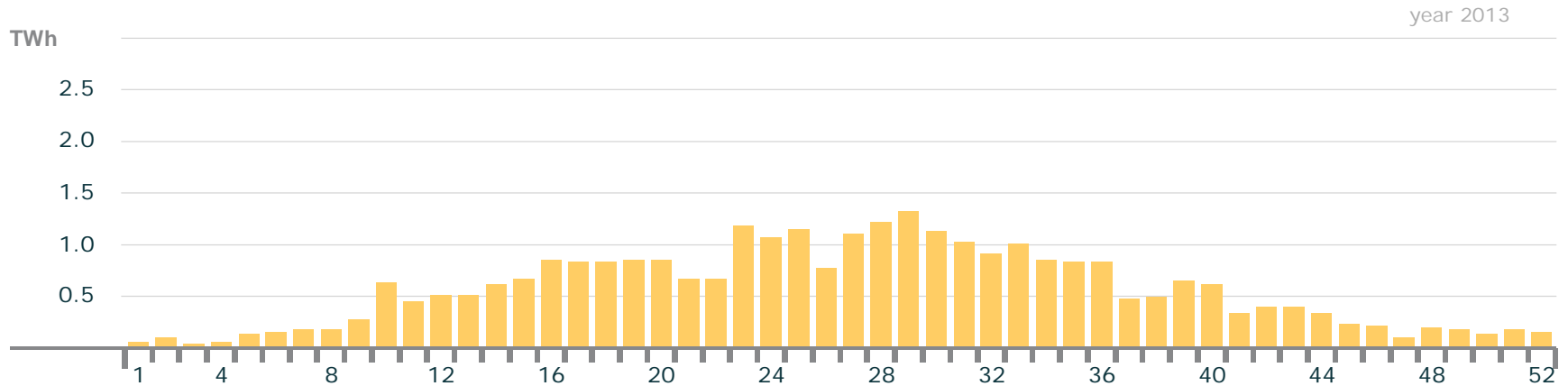
Graph: B. Burger, Fraunhofer ISE; data: Statistisches Bundesamt (DESTATIS); Entso-e

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Weekly Production Solar

Weekly Production Solar

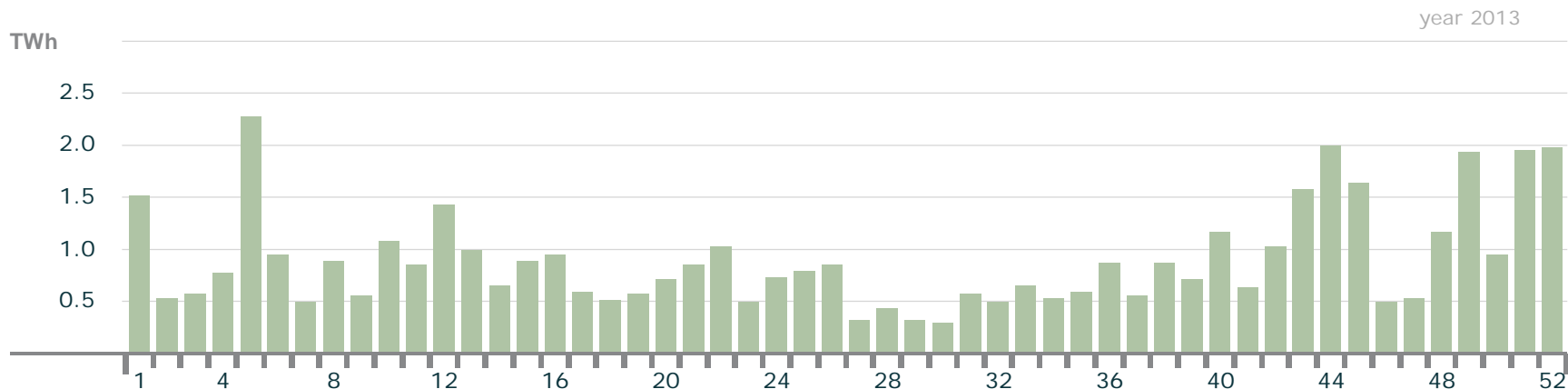


- The maximal weekly solar electricity production was 1.32 TWh in calendar week 29
- The minimal weekly production was 0.04 TWh in calendar week 3

Graph: B. Burger, Fraunhofer ISE; solar data: EEX Transparency Platform

Weekly Production Wind

Weekly Production Wind

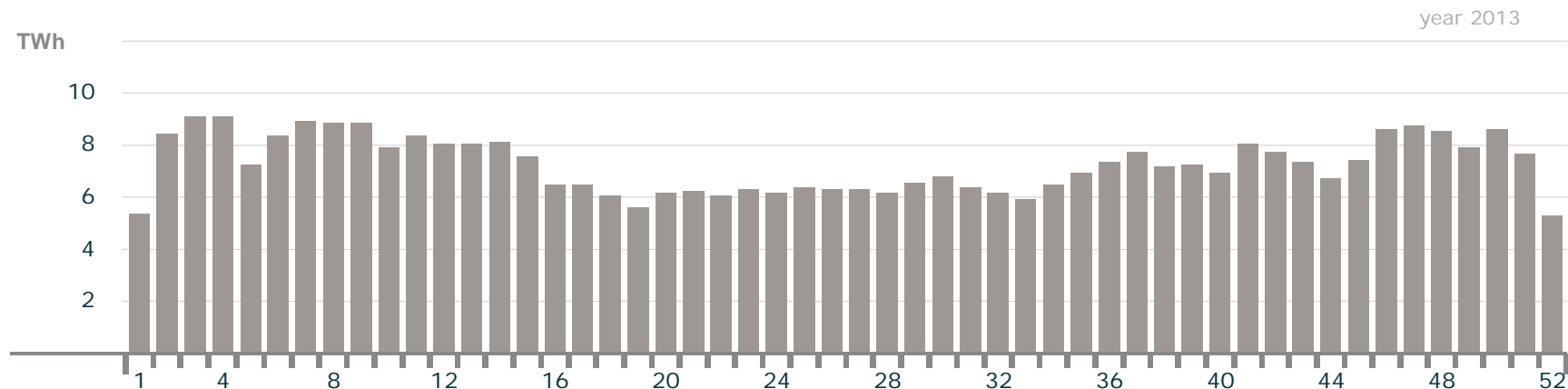


- The maximal weekly wind electricity production was 2.26 TWh in calendar week 5
- The minimal weekly production was 0.29 TWh in calendar week 30

Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Weekly Production Conventional > 100 MW

Weekly Production Conventional > 100 MW

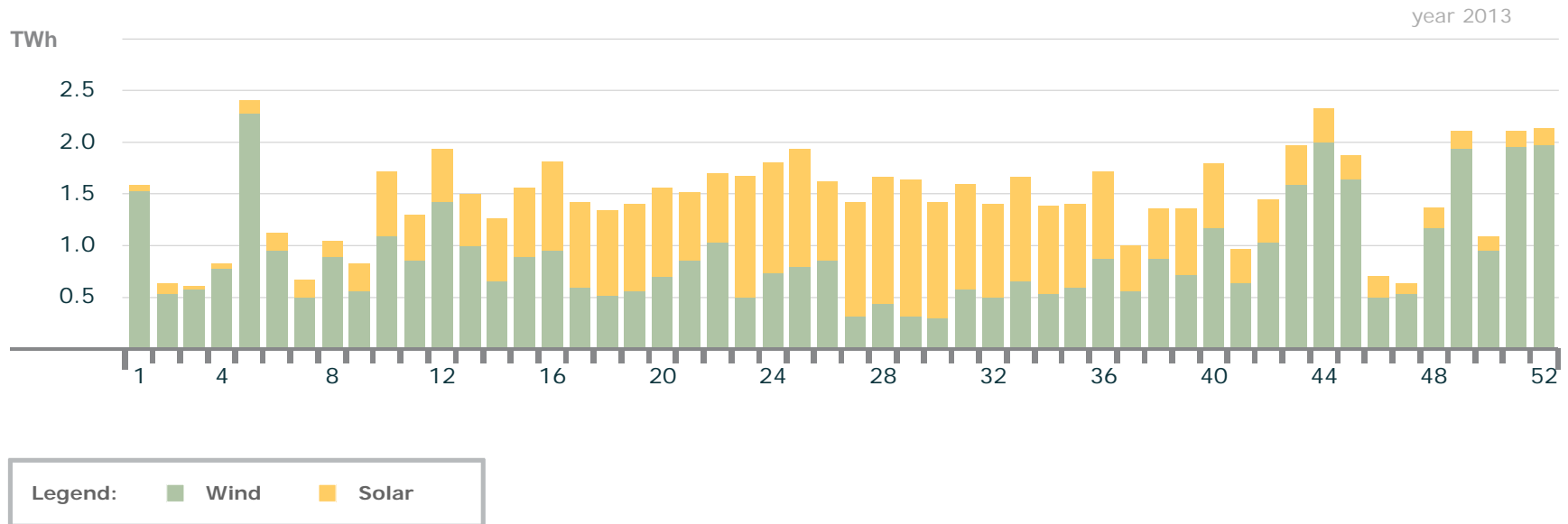


- The maximal weekly electricity production from conventional sources was 9.1 TWh in calendar week 3
- The minimal weekly production was 5.3 TWh in calendar week 52

Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Weekly Production Solar and Wind

Weekly Production Solar and Wind

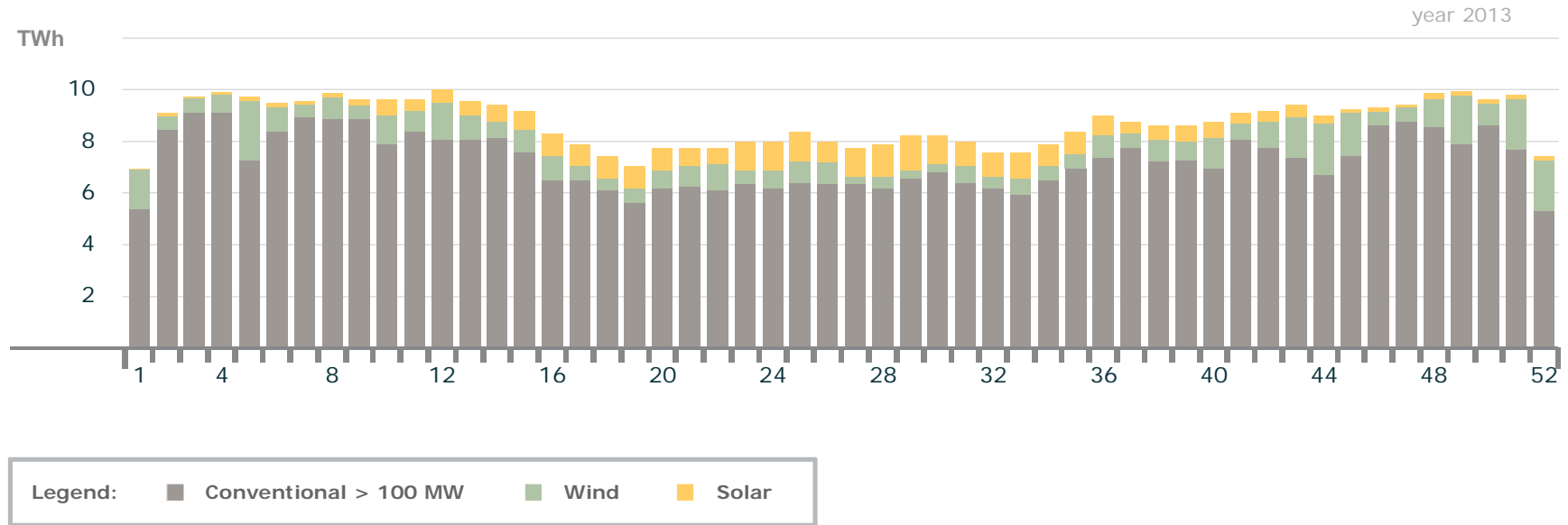


- The maximal weekly sum of solar and wind production was 2.4 TWh in calendar week 5
- The minimal weekly sum was 0.61 TWh in calendar week 3

Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Weekly Production Solar, Wind and Conventional

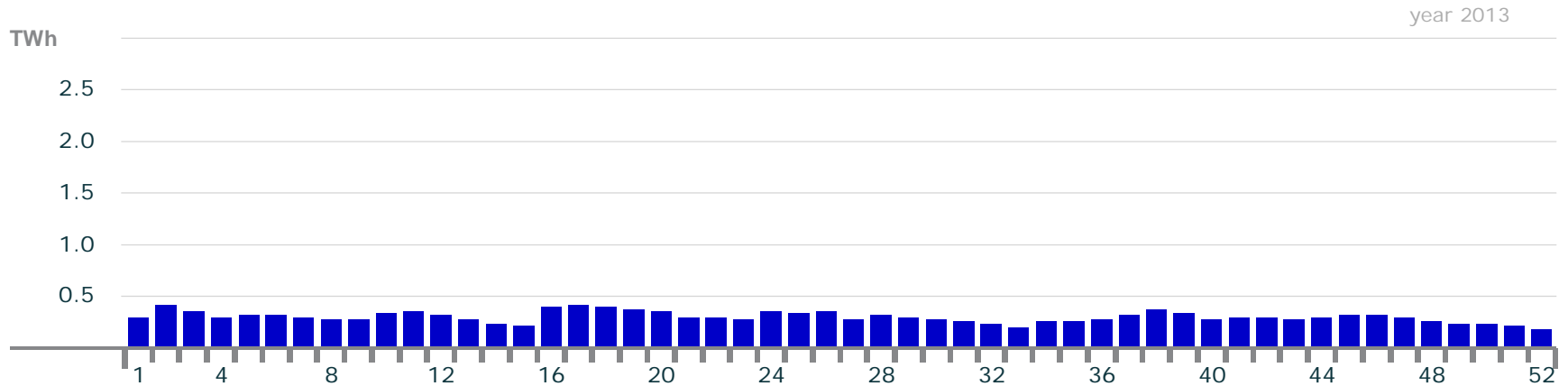
Weekly Production Solar, Wind and Conventional > 100 MW



Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Weekly Production Run of River

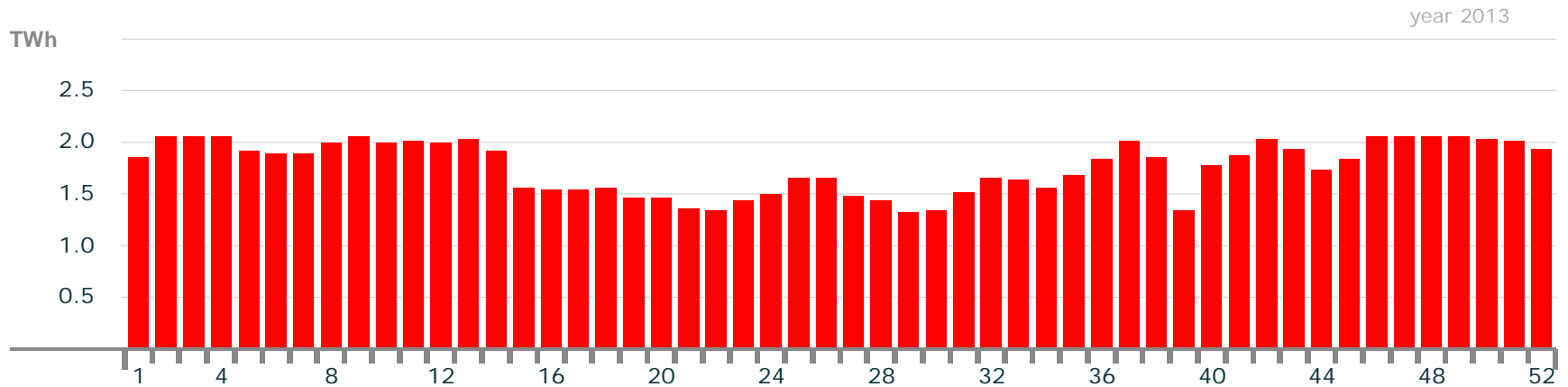
Weekly Production Run of River



Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Weekly Production Uranium

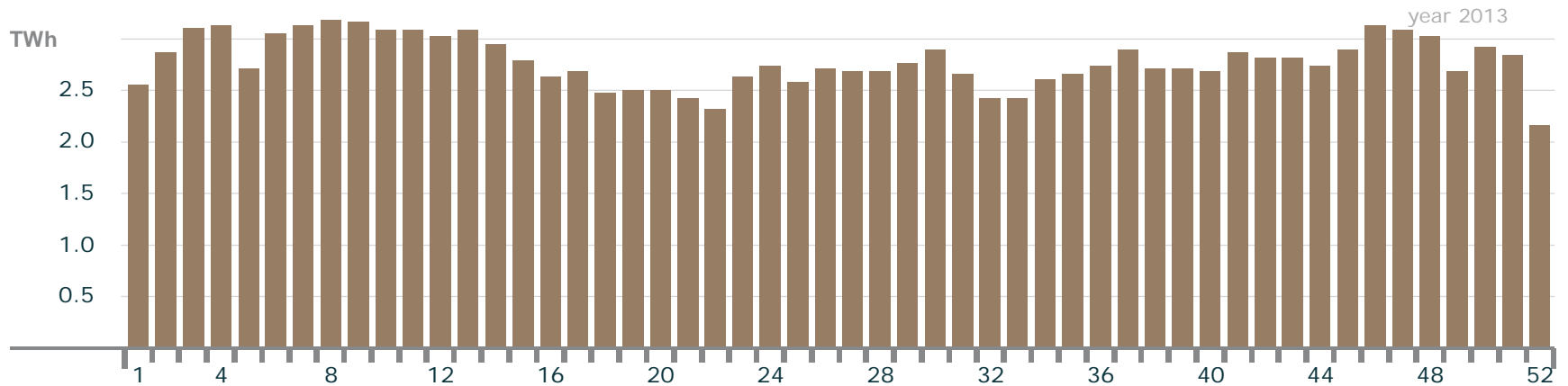
Weekly Production Uranium



Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Weekly Production Brown Coal

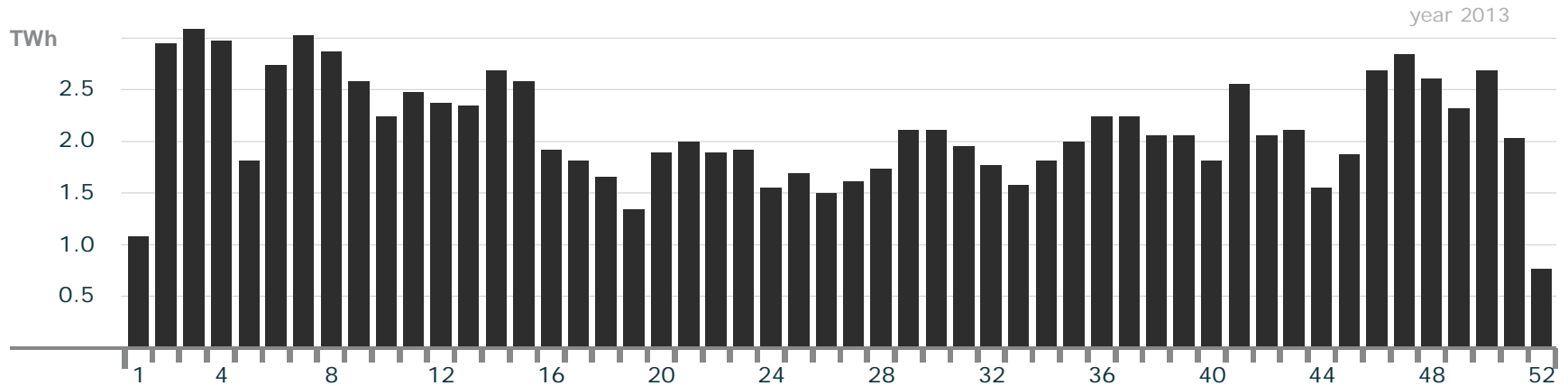
Weekly Production Brown Coal



Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Weekly Production Hard Coal

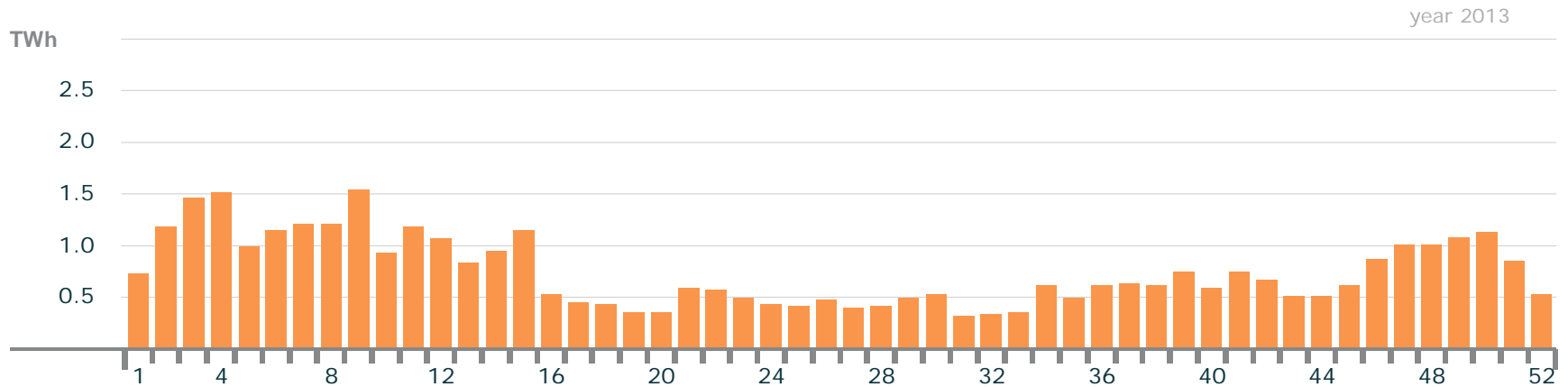
Weekly Production Hard Coal



Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Weekly Production Gas

Weekly Production Gas



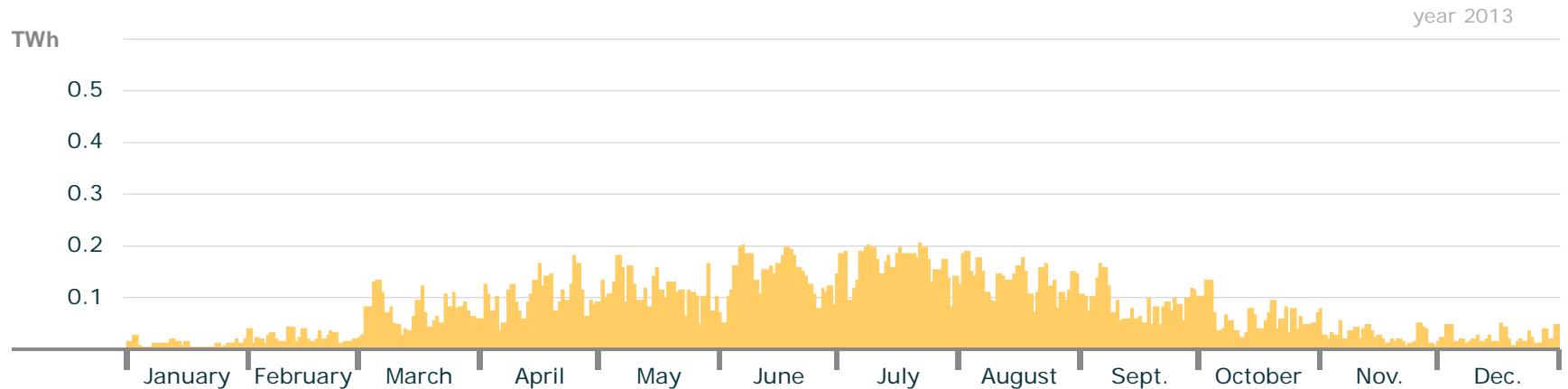
Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

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Daily production Solar

Daily Production Solar

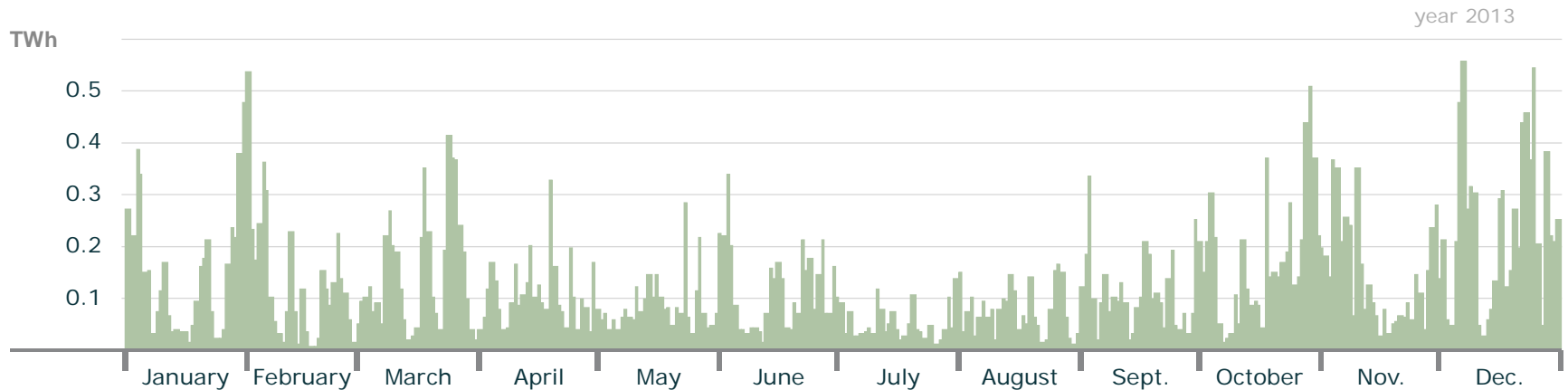


- The maximal daily production was 0.20 TWh at 21.07.2013
- The minimal daily production was 0.002 TWh at 18.01.2013

Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Daily production Wind

Daily Production Wind

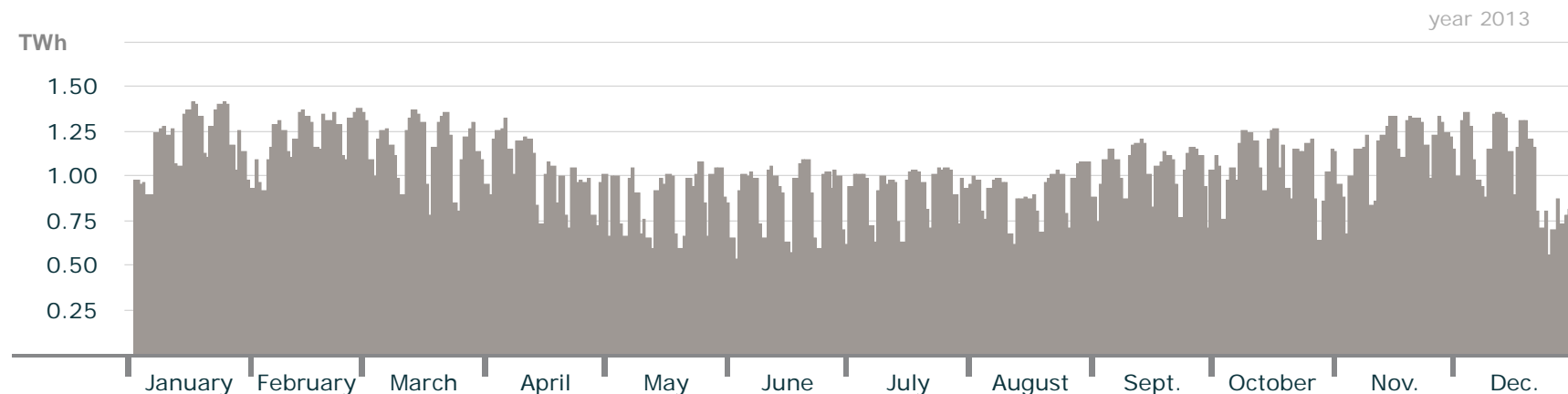


- The maximal daily production was 0.56 TWh at 16.12.2013
- The minimal daily production was 0.006 TWh at 17.02.2013

Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Daily production Conventional > 100 MW

Daily production Conventional > 100 MW

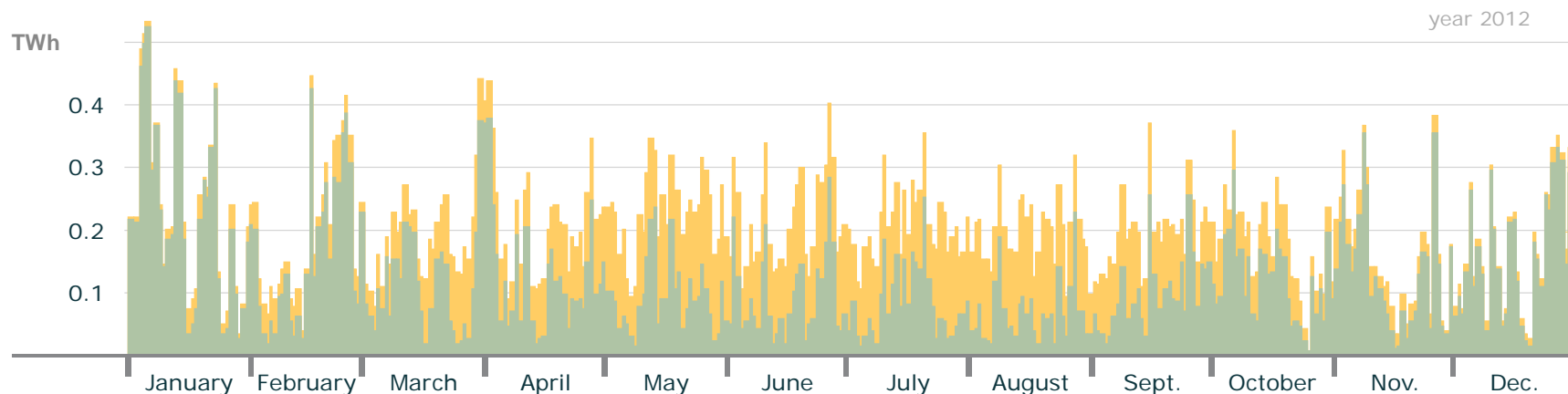


- The maximal daily production from conventional sources greater 100 MW was 1.41 TWh at 24.01.2013
- The minimal daily production from conventional sources greater 100 MW was 0.55 TWh at 02.06.2013

Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Daily production Solar and Wind

Daily production Solar and Wind

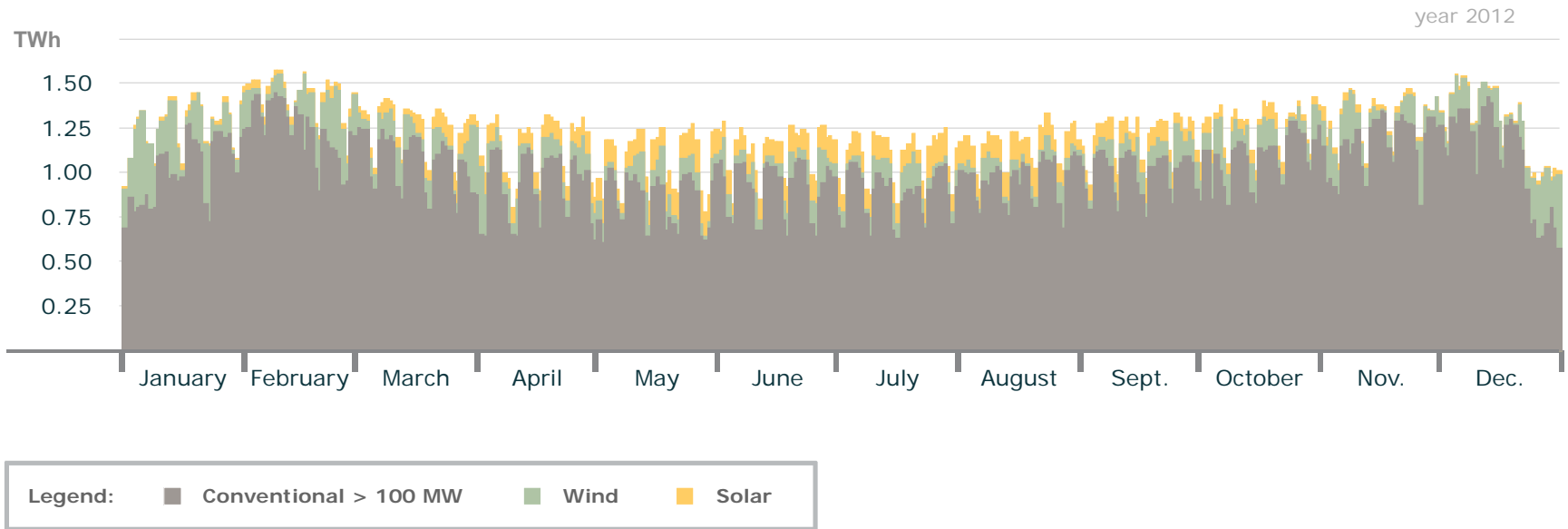


- The maximal daily sum of Solar and Wind production was 0.58 TWh at 31.01.2013
- The minimal daily sum of Solar and Wind production was 0.022 TWh at 16.01.2013

Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Daily production Solar, Wind and Conventional

Daily production Solar, Wind and Conventional > 100 MW



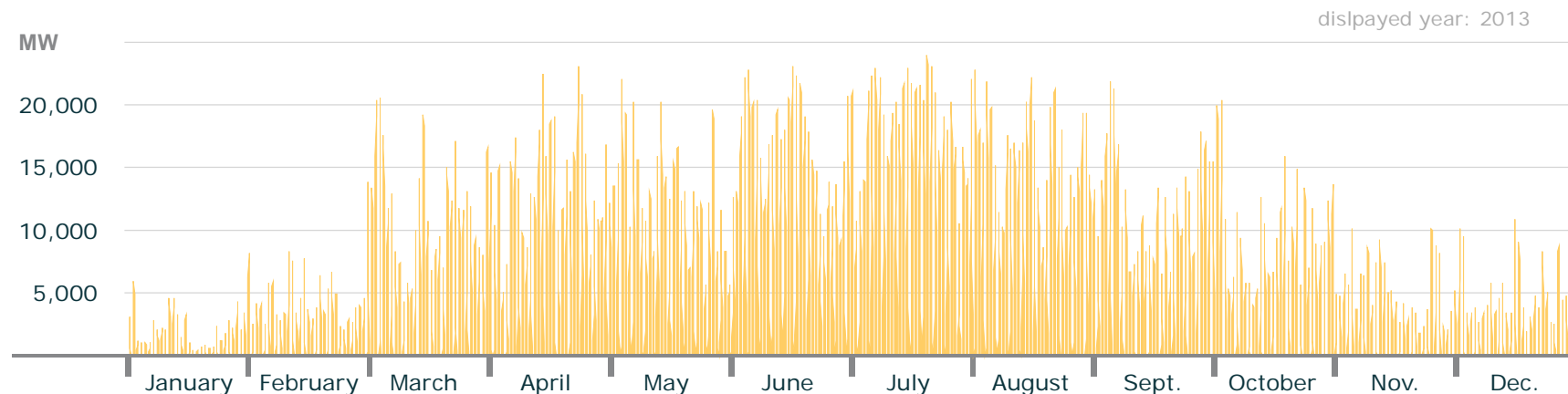
Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

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Electricity Production: Solar

Actual production solar

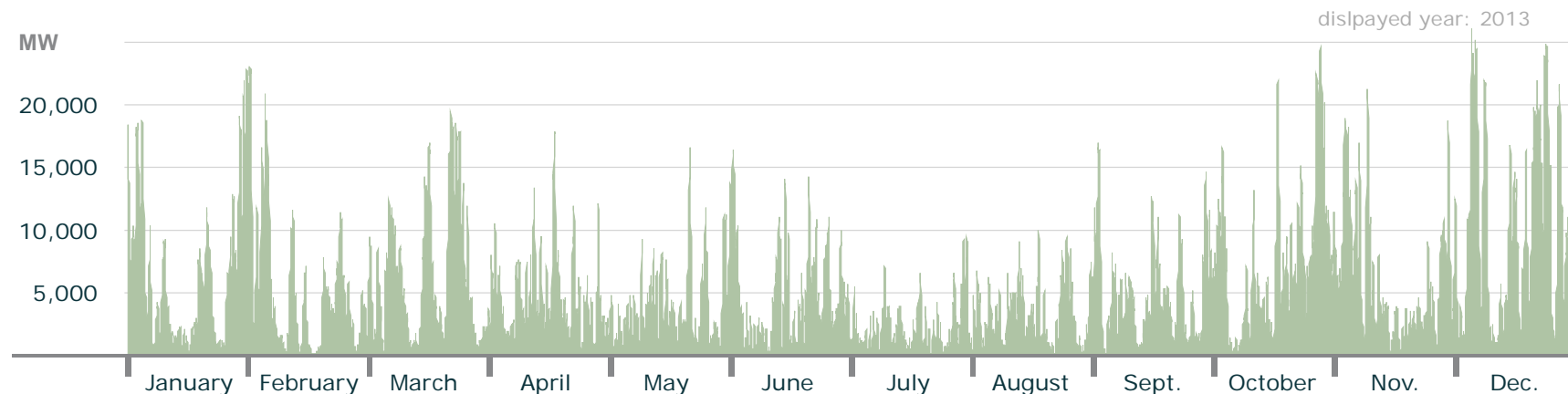


- The maximal solar power was 24 GW at 21st of July 2013, 13:30 (GMT +2:00)

Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Electricity Production: Wind

Actual production wind

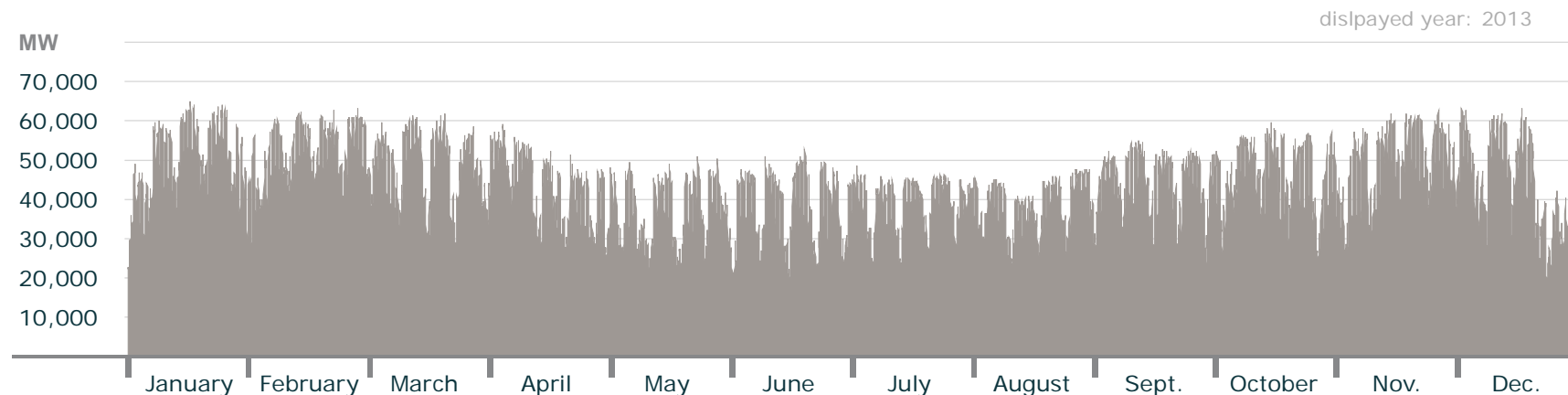


- The maximal wind power was 26.3 GW at 5th of December 2013, 18:15 (GMT +1:00)
- The minimal wind power was 0.12 GW am 4th of September, 13:45 (GMT +2:00)

Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Electricity Production: Conventional sources \geq 100 MW

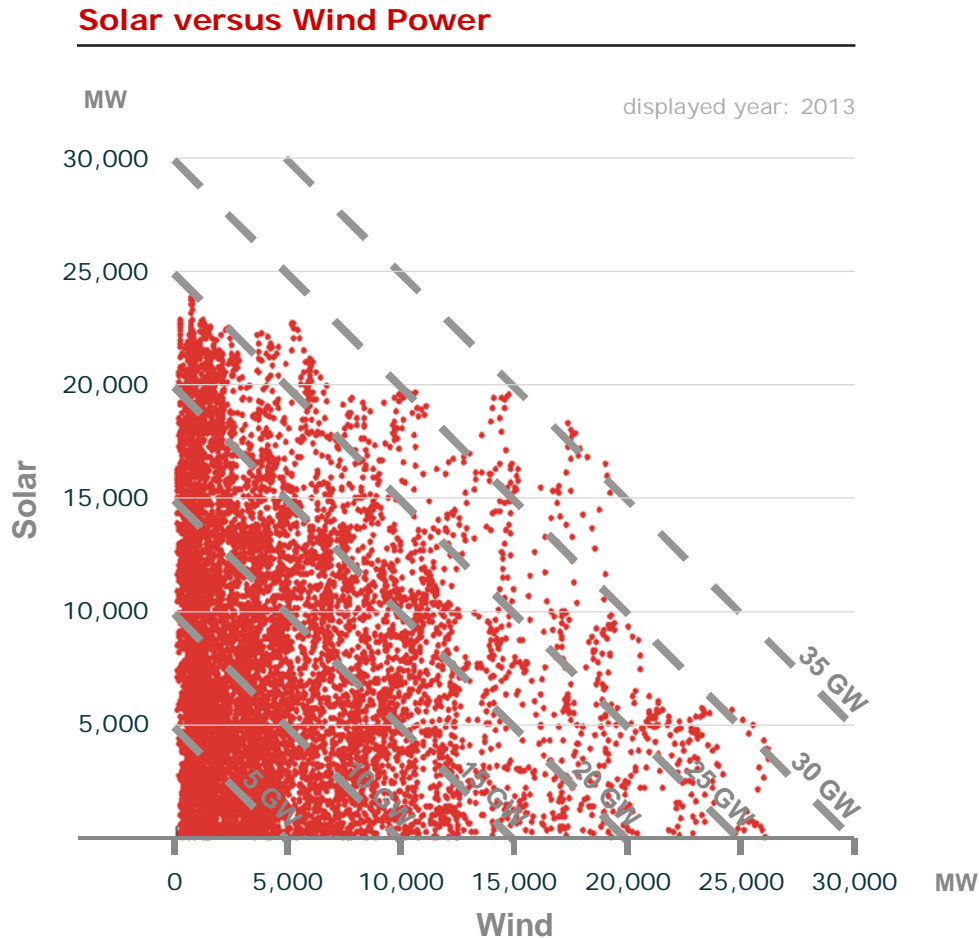
Actual production of conventional sources \geq 100 MW



- The maximal power of conventional sources greater 100 MW was 64.8 GW at 16th of January 2013, 17:00 (GMT +1:00)
- The minimal power was 18.9 GW at 16th of June 2013, 15:00 (GMT +2:00)

Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Power Solar versus Wind

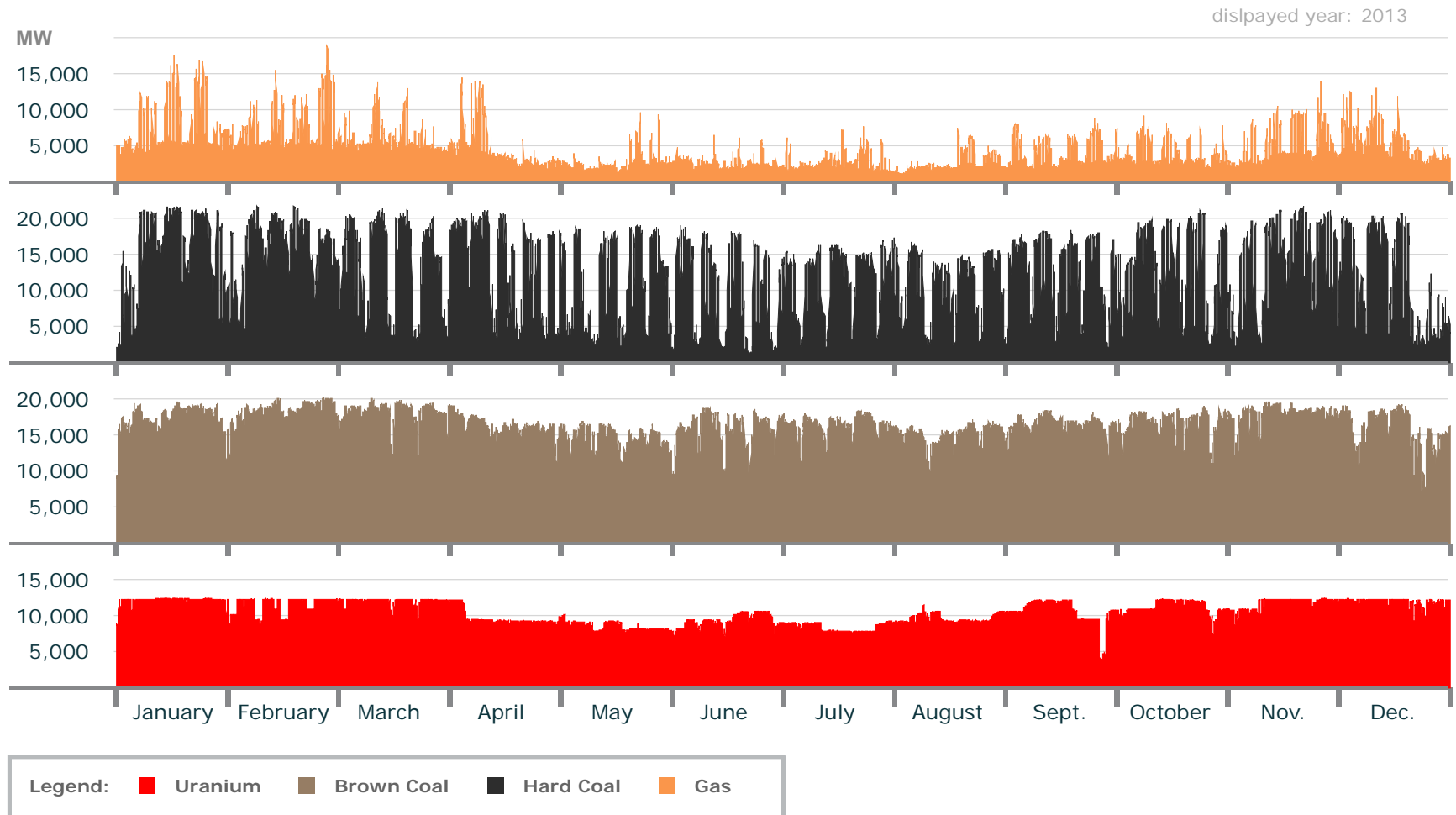


- The maximal sum of Solar and Wind power was up to now approx. 36 GW

Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Electricity Production: Uranium, Coal and Gas

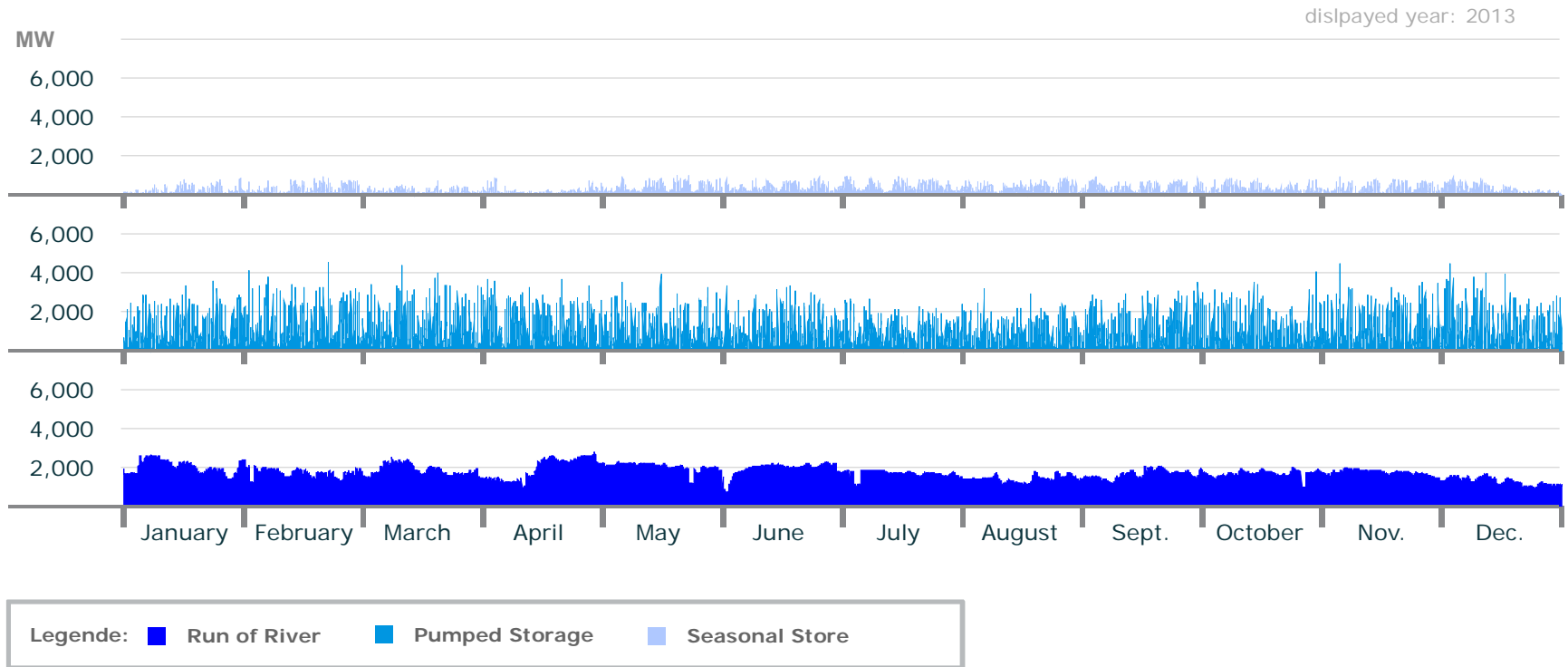
Real Production



Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Electricity Production: Run of River, Pumped Storage and Seasonal Storage

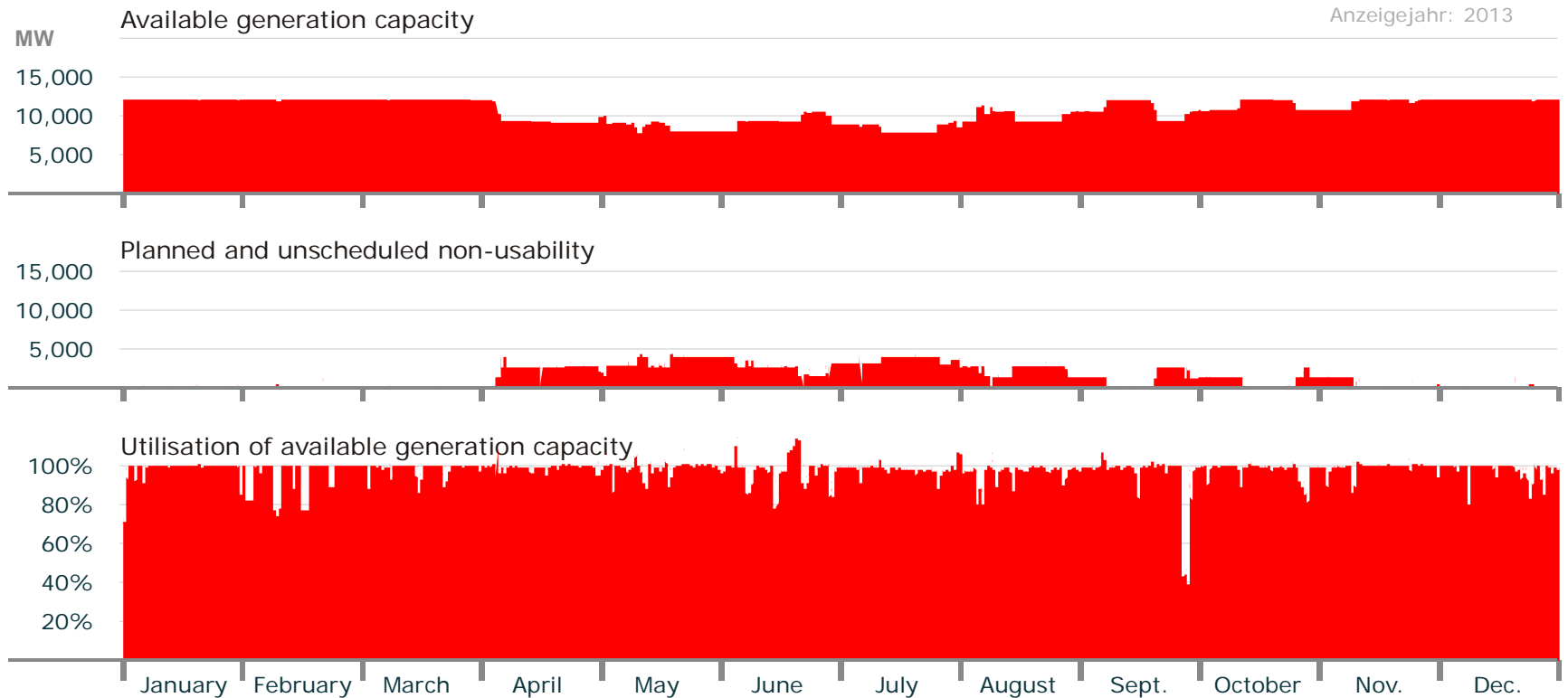
Real Production



Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Uranium: Available capacity, non-usability and utilisation

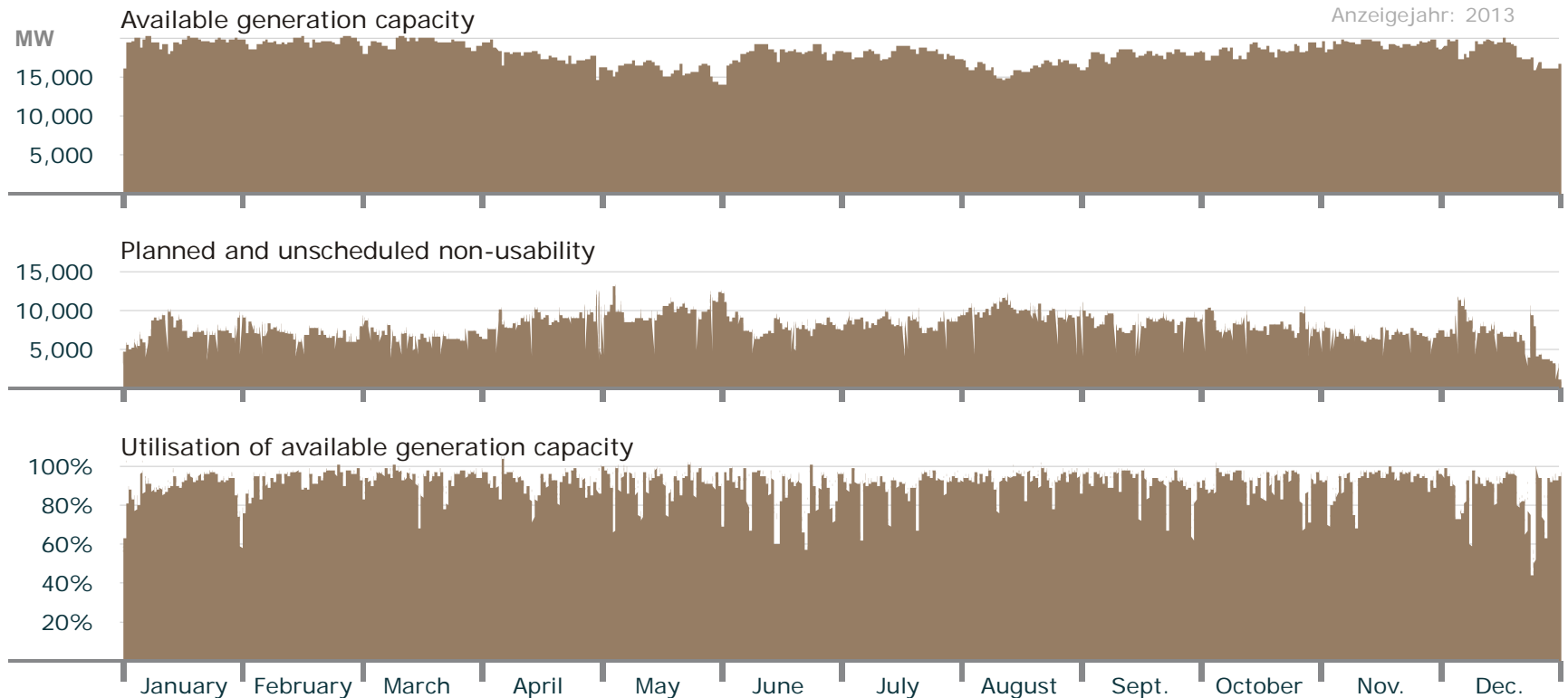
Uranium



Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Brown Coal: Available capacity, non-usability and utilisation

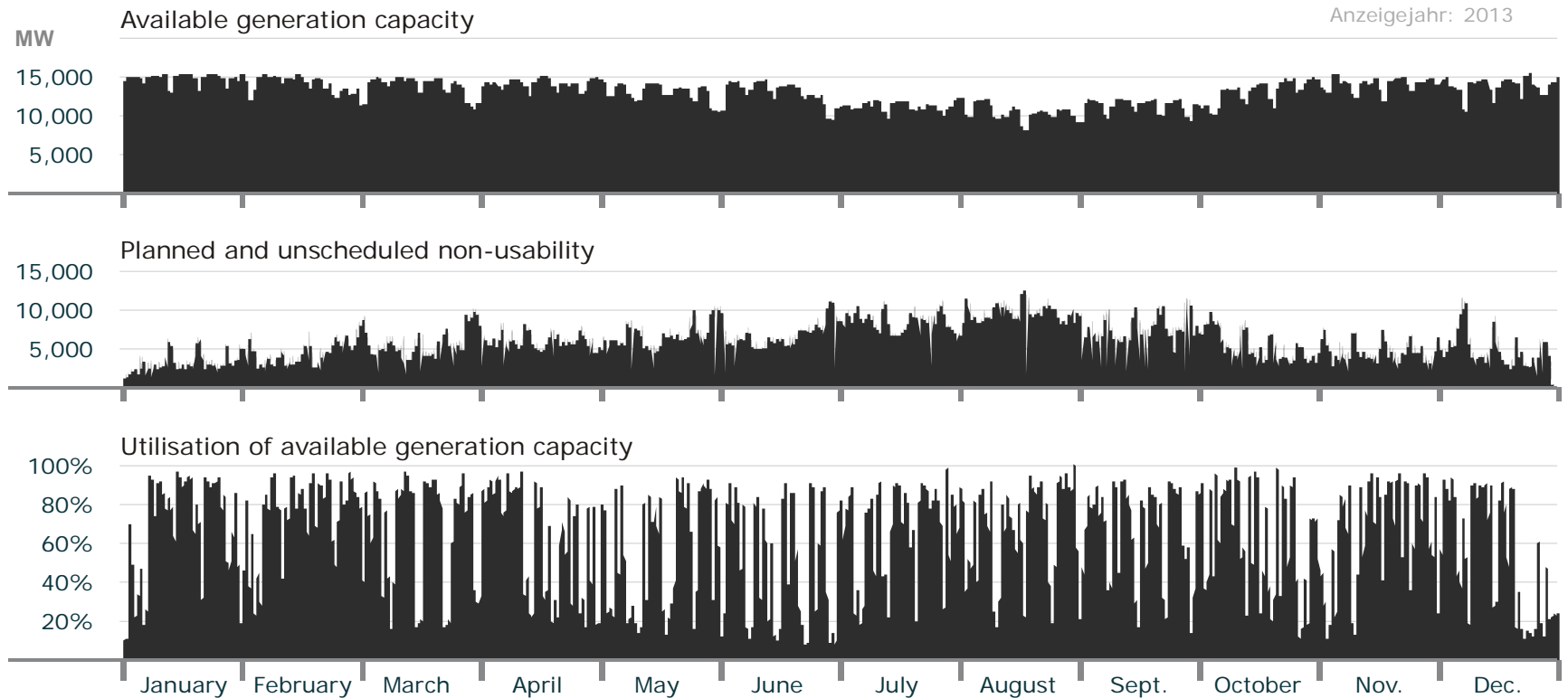
Brown Coal



Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Hard Coal: Available capacity, non-usability and utilisation

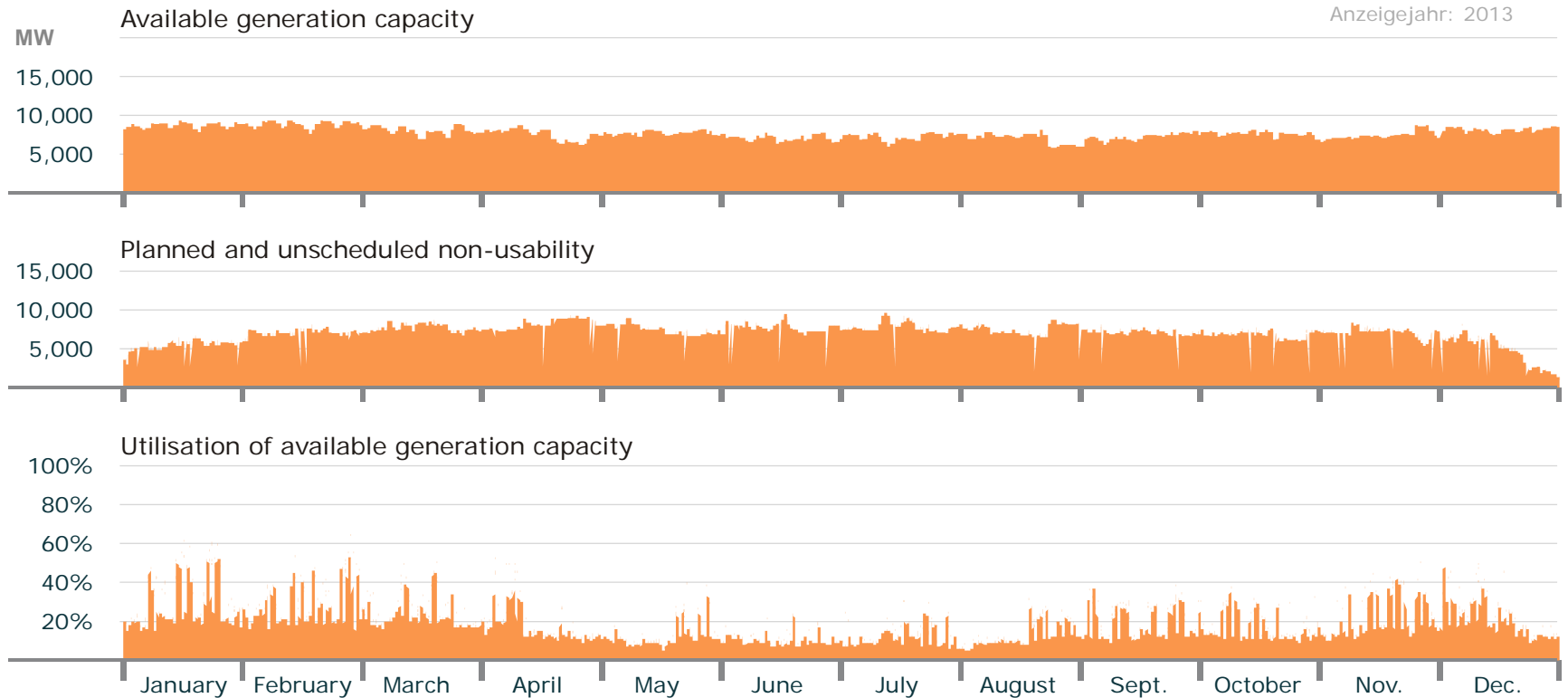
Hard Coal



Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Gas: Available capacity, non-usability and utilisation

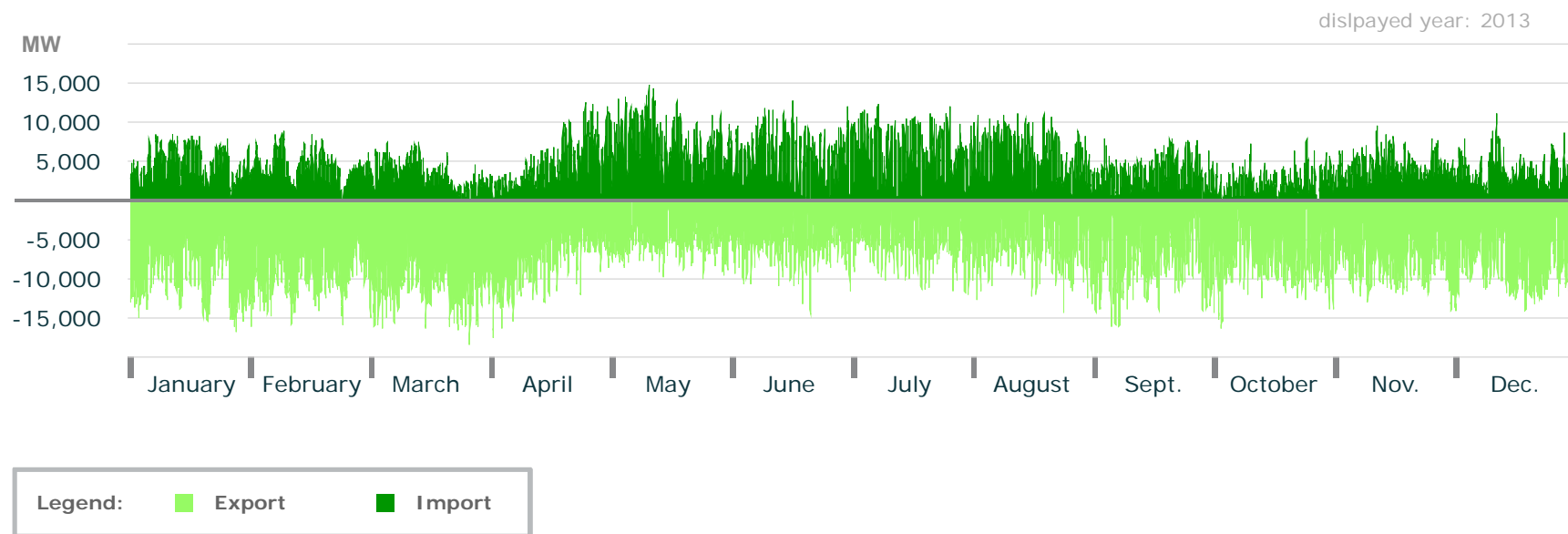
Gas



Graph: B. Burger, Fraunhofer ISE; data: EEX Transparency Platform

Electricity Export and Import

Export and Import

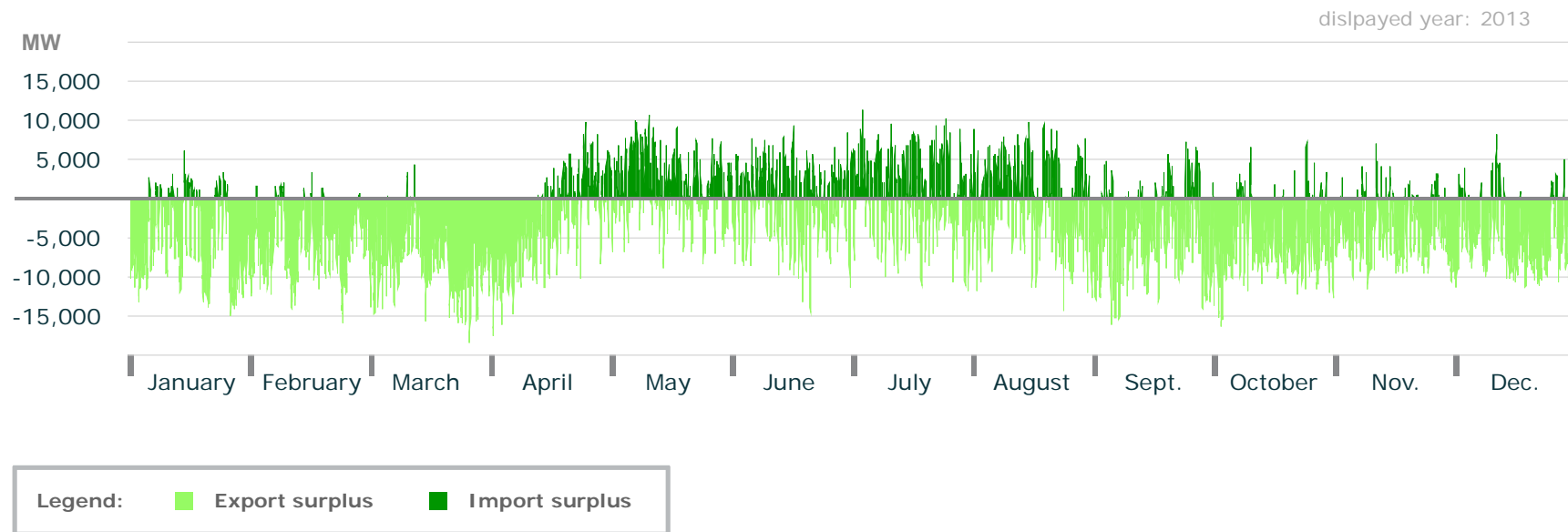


■ Germany exported 69.6 TWh and imported 38.3 TWh in 2013.

Graph: B. Burger, Fraunhofer ISE; data: Entso-e

Electricity Export and Import Balance

Export and Import Balance



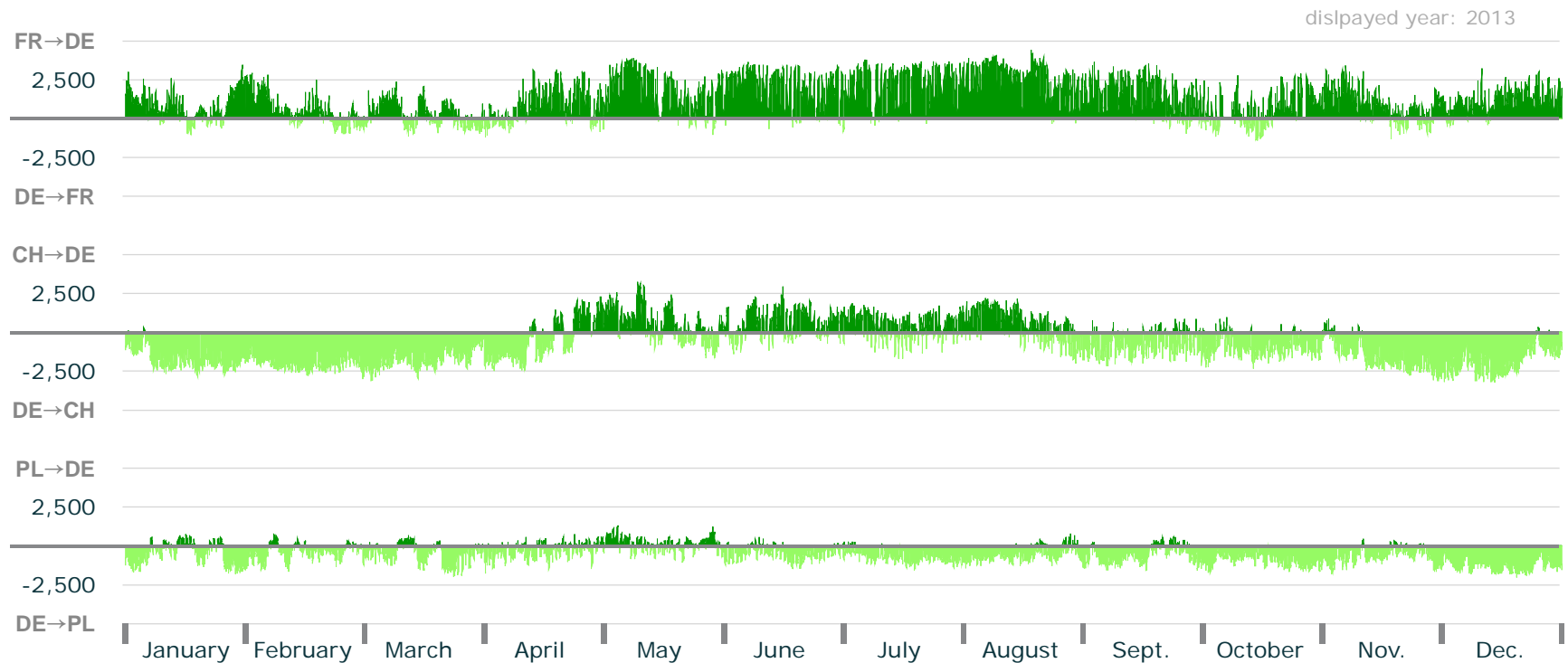
■ The export surplus in 2013 was approx. 31.3 TWh.

Graph: B. Burger, Fraunhofer ISE; data: Entso-e

Electricity Export and Import

France, Switzerland and Poland

Export and Import

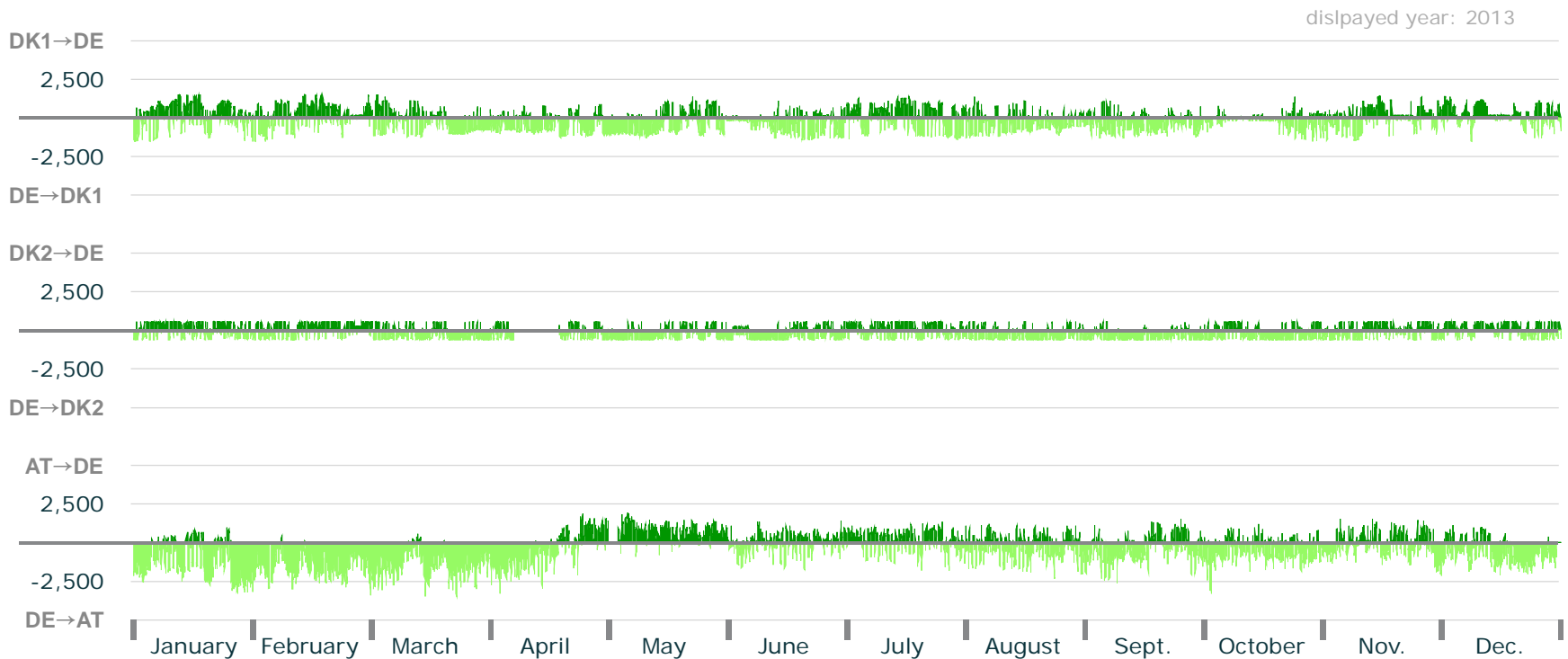


Legend: ■ Export ■ Import

Graph: B. Burger, Fraunhofer ISE; data: Entso-e

Electricity Export and Import Denmark and Austria

Export and Import

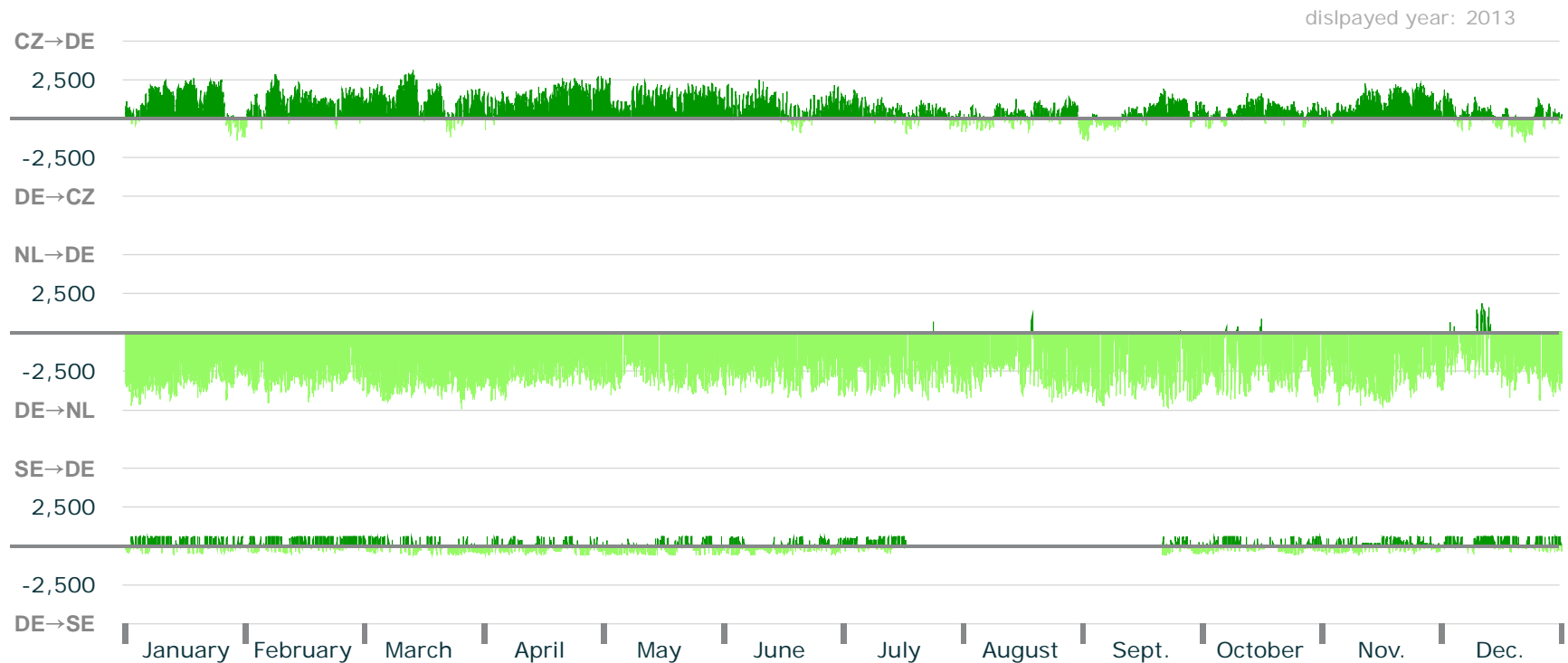


Legend: ■ Export ■ Import

Graph: B. Burger, Fraunhofer ISE; data: Entso-e

Electricity Export and Import Czech Republic, the Netherlands and Sweden

Export and Import



Legend: ■ Export ■ Import

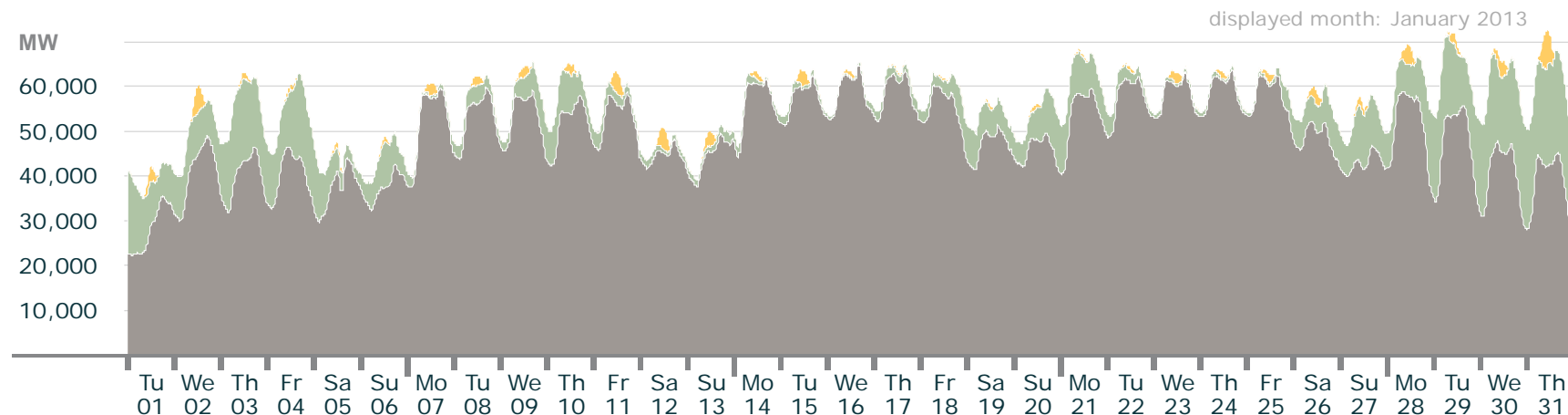
Graph: B. Burger, Fraunhofer ISE; data: Entso-e

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 - Monthly power curves for conventional, wind and solar
 - Monthly power curves with import and export
 - Detailed monthly power curves
 - Diurnal power courses
- Weekly power curves

Electricity Production in Germany: January 2013

Actual production

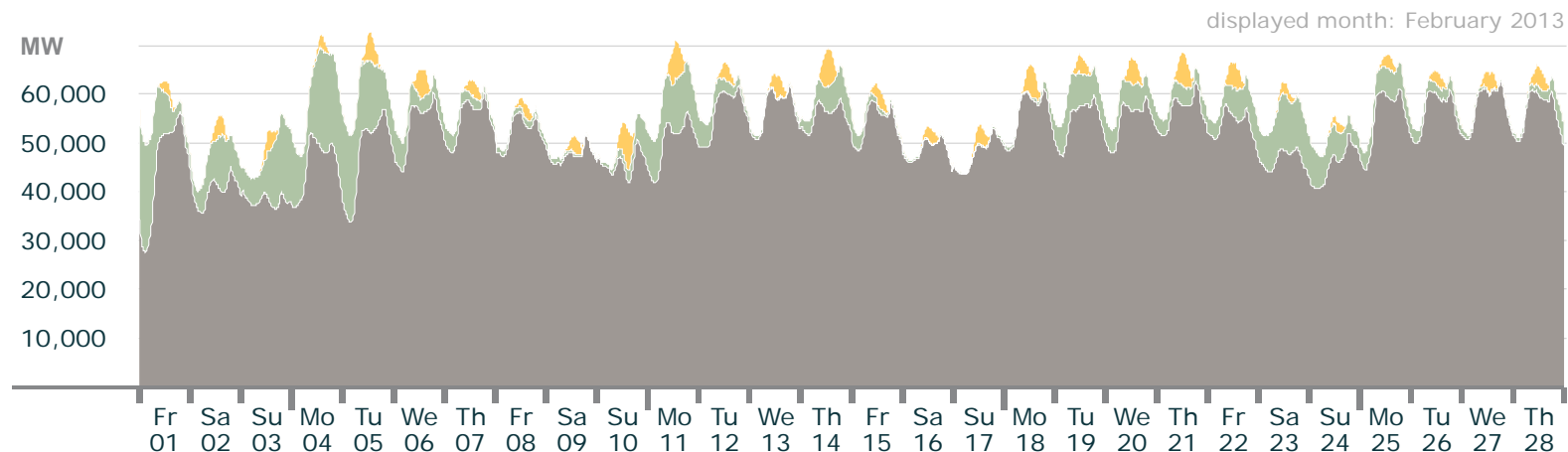


	max. power	date max. power	monthly energy
Solar	8.4 GW	31.01., 12:00 (+1:00)	0.35 TWh
Wind	23.3 GW	31.01., 18:30 (+1:00)	5.0 TWh
Conventional > 100 MW	64.8 GW	16.01., 17:00 (+1:00)	36.3 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform /

Electricity Production in Germany: February 2013

Actual production

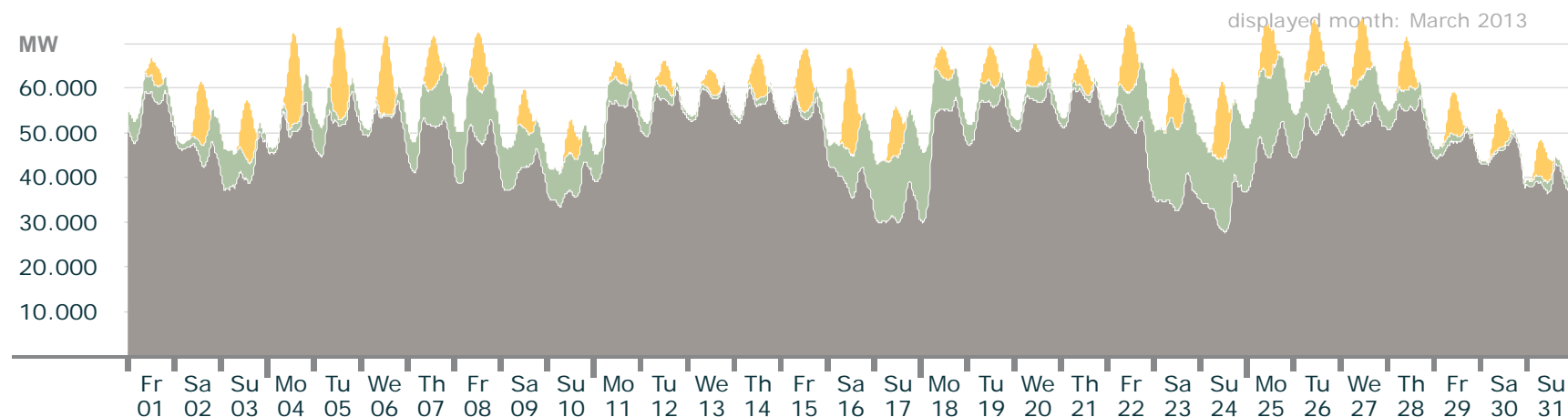


	max. power	date max. power	monthly energy
Solar	8.4 GW	10.02., 13:30 (+1:00)	0.65 TWh
Wind	22.8 GW	01.02., 00:45 (+1:00)	3.2 TWh
Conventional > 100 MW	63.0 GW	27.02., 18:00 (+1:00)	34.5 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform /

Electricity Production in Germany: March 2013

Actual production

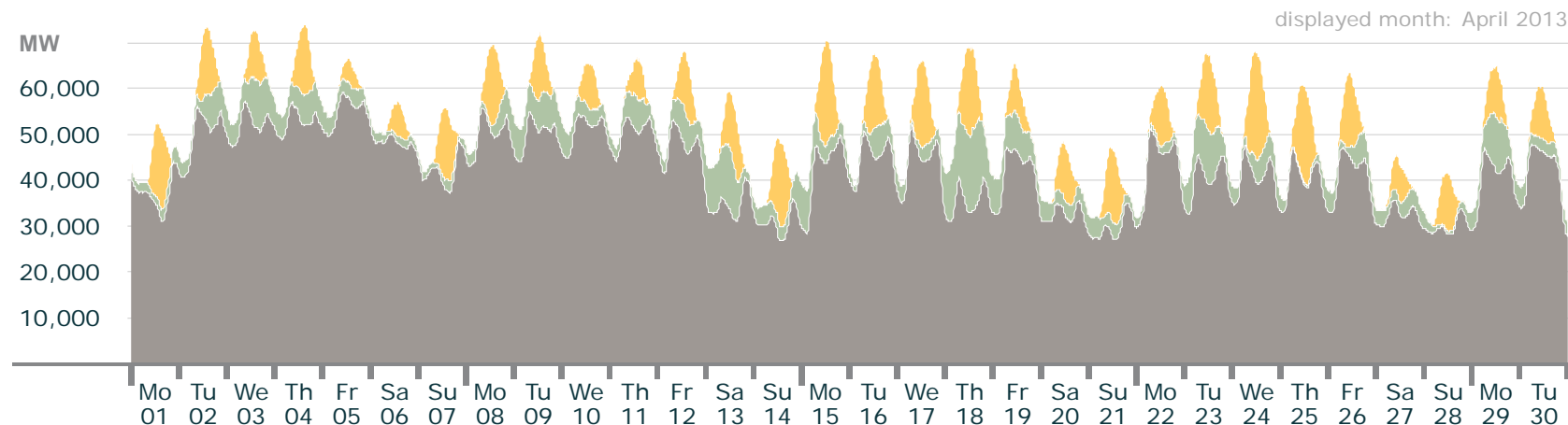


	max. power	date max. power	monthly energy
Solar	20.7 GW	05.03., 12:30 (+1:00)	2.3 TWh
Wind	19.5 GW	23.03., 10:30 (+1:00)	4.7 TWh
Conventional > 100 MW	62.0 GW	21.03., 19:00 (+1:00)	35.7 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform /

Electricity Production in Germany: April 2013

Actual production

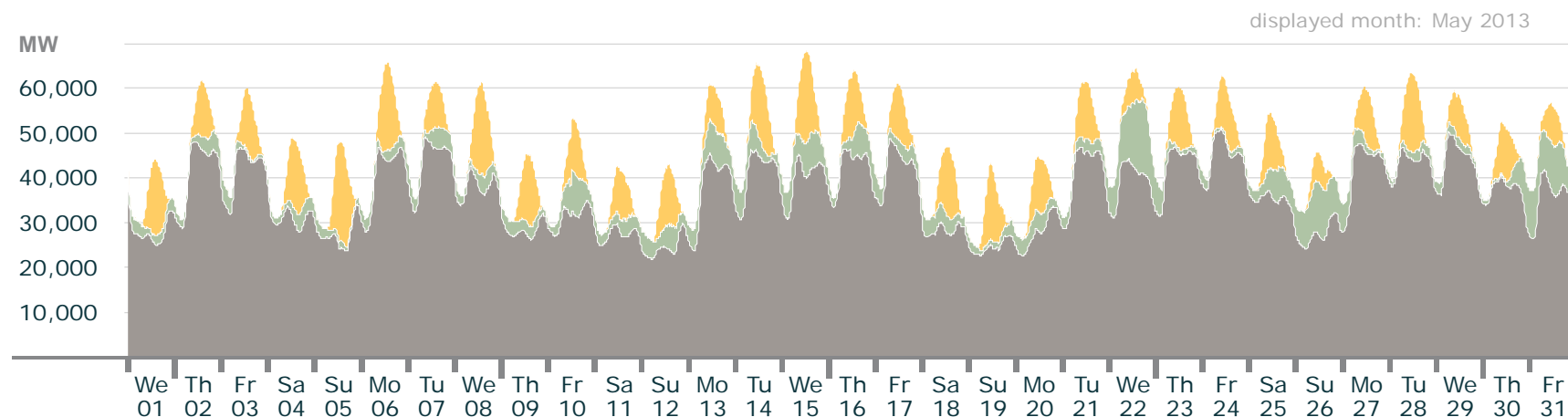


	max. power	date max. power	monthly energy
Solar	23.1 GW	24.04., 13:45 (+2:00)	3.2 TWh
Wind	18.3 GW	18.04., 14:45 (+2:00)	3.3 TWh
Conventional > 100 MW	59.2 GW	05.04., 09:00 (+2:00)	30.6 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform /

Electricity Production in Germany: May 2013

Actual production

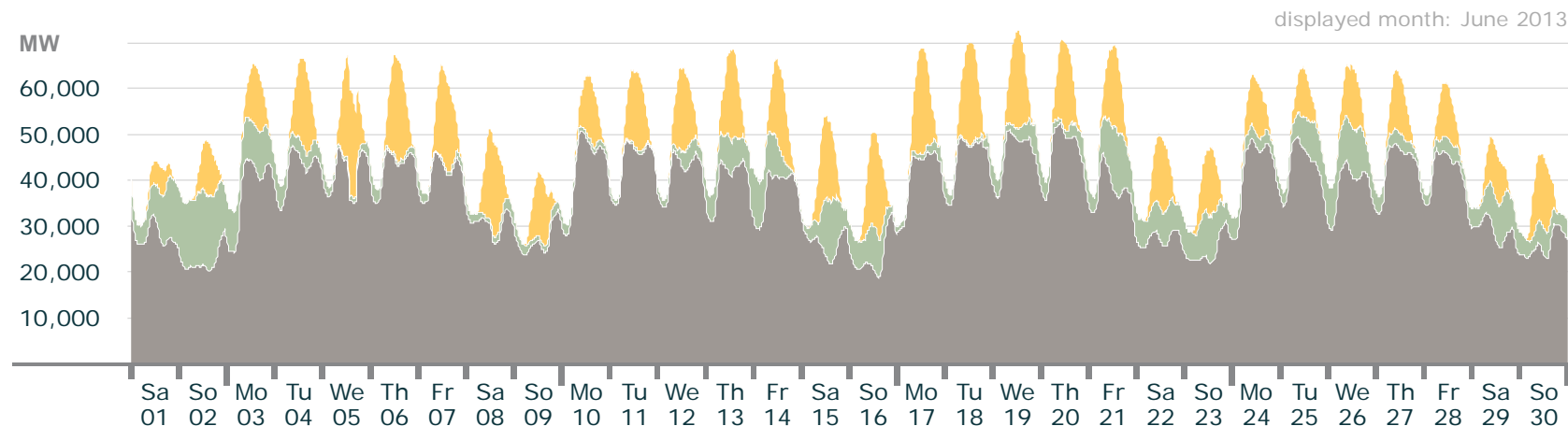


	max. power	date max. power	monthly energy
Solar	22.1 GW	05.05., 12:30 (+2:00)	3.5 TWh
Wind	16.8 GW	22.05., 18:00 (+2:00)	2.8 TWh
Conventional > 100 MW	51.0 GW	24.05., 11:00 (+2:00)	26.9 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform /

Electricity Production in Germany: June 2013

Actual production

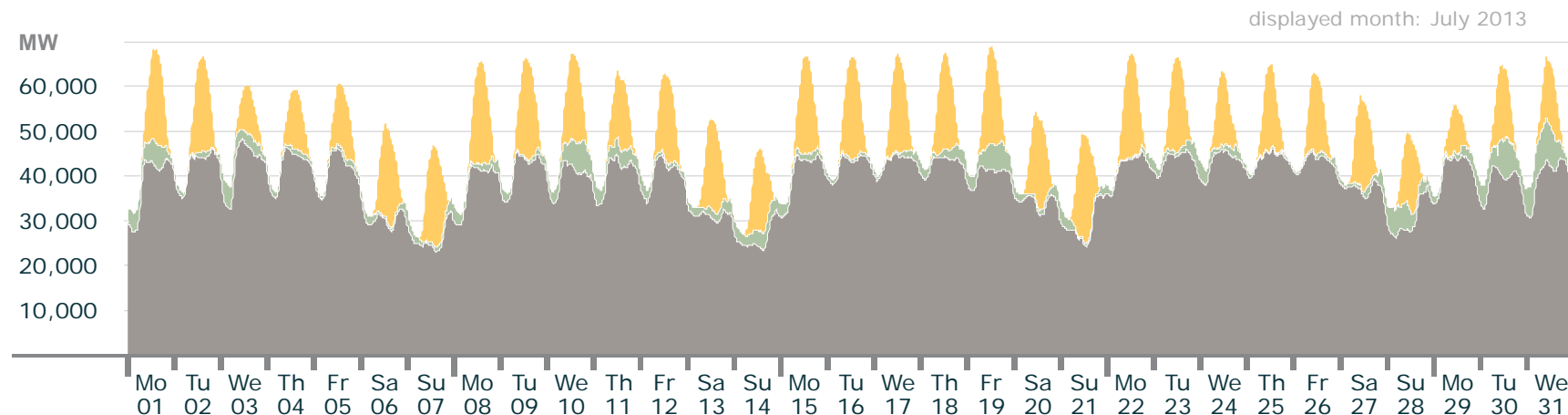


	max. power	date max. power	monthly energy
Solar	23.2 GW	17.06., 13:15 (+2:00)	4.3 TWh
Wind	16.8 GW	02.06., 10:45 (+2:00)	3.4 TWh
Conventional > 100 MW	52.5 GW	20.06., 11:00 (+2:00)	26.4 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform /

Electricity Production in Germany: July 2013

Actual production

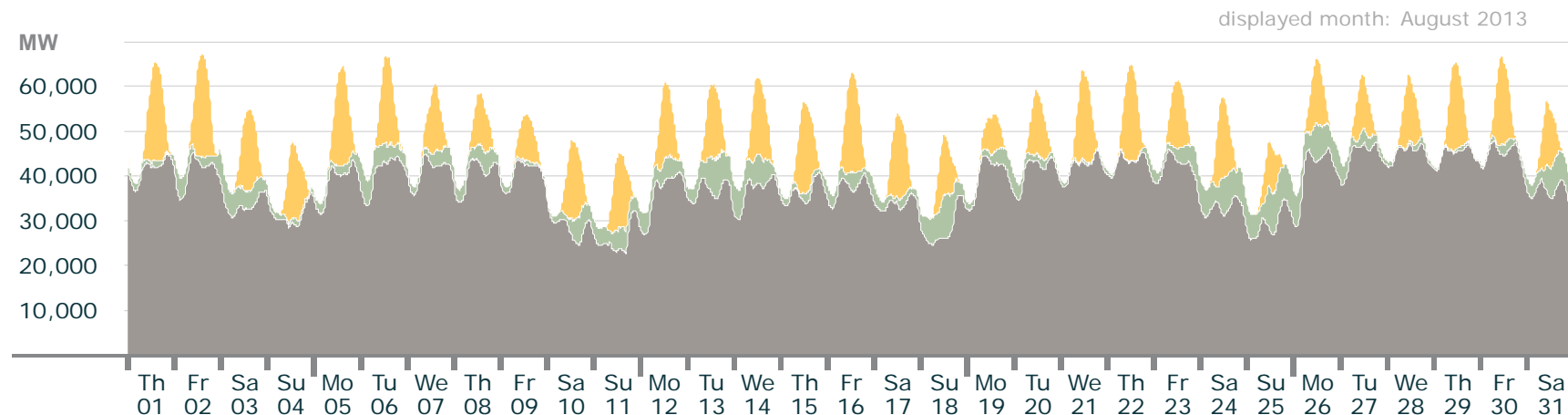


	max. power	date max. power	monthly energy
Solar	24.0 GW	21.07., 13:30 (+2:00)	5.1 TWh
Wind	9.7 GW	31.07., 10:30 (+2:00)	1.7 TWh
Conventional > 100 MW	48.4 GW	03.07., 10:00 (+2:00)	28.8 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform /

Electricity Production in Germany: August 2013

Actual production

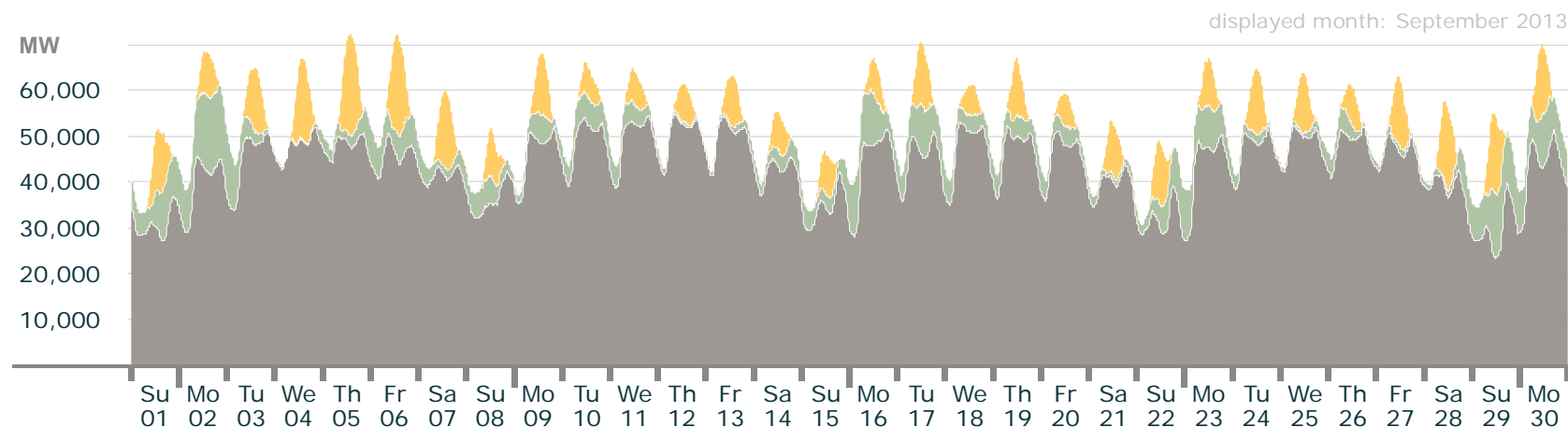


	max. power	date max. power	monthly energy
Solar	22.9 GW	02.08., 13:15 (+2:00)	4.1 TWh
Wind	10.3 GW	18.08., 14:45 (+2:00)	2.3 TWh
Conventional > 100 MW	47.9 GW	30.08., 09:00 (+2:00)	28.3 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform /

Electricity Production in Germany: September 2013

Actual production

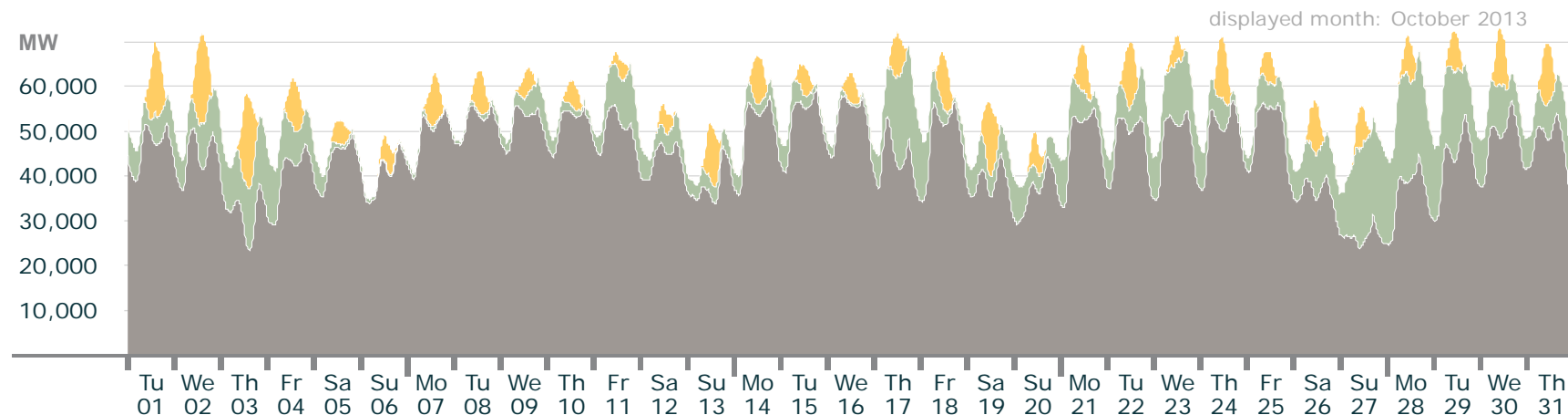


	max. power	date max. power	monthly energy
Solar	22.0 GW	05.09., 13:30 (+2:00)	2.6 TWh
Wind	17.0 GW	02.09., 15:15 (+2:00)	3.4 TWh
Conventional > 100 MW	55.1 GW	12.09., 08:00 (+2:00)	31.3 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform /

Electricity Production in Germany: October 2013

Actual production

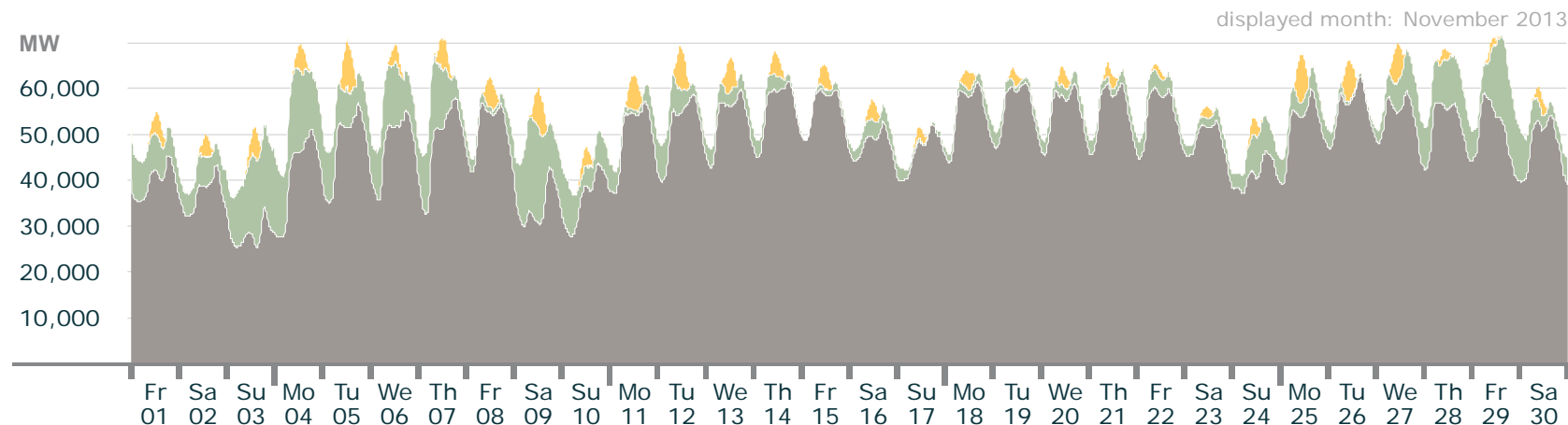


	max. power	date max. power	monthly energy
Solar	20.5 GW	03.10., 13:00 (+2:00)	1.9 TWh
Wind	24.9 GW	28.10., 11:15 (+1:00)	5.5 TWh
Conventional > 100 MW	59.4 GW	15.10., 19:00 (+2:00)	33.3 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform /

Electricity Production in Germany: November 2013

Actual production

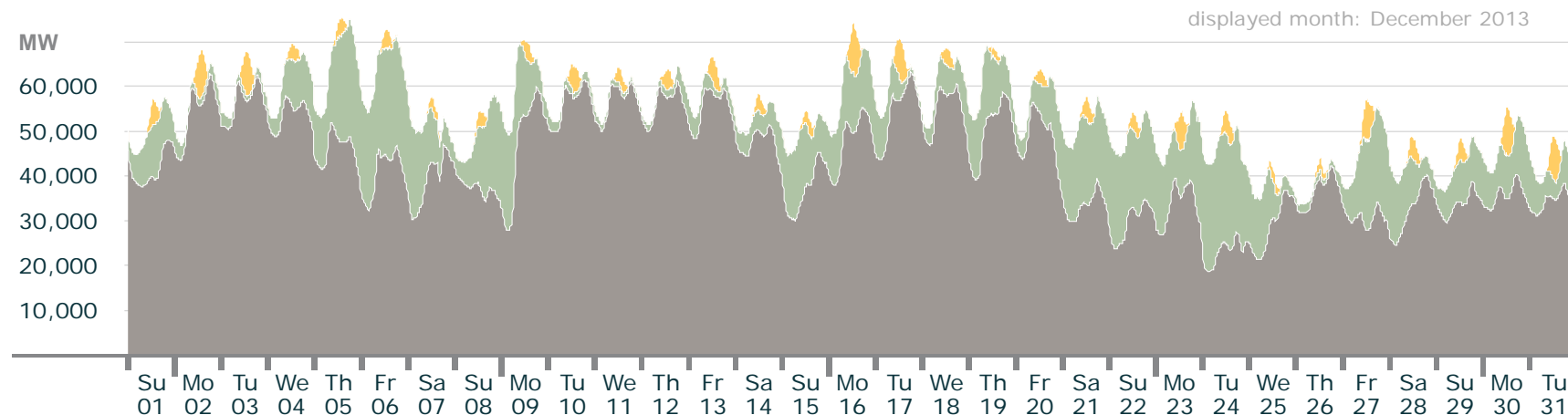


	max. power	date max. power	monthly energy
Solar	10.4 GW	25.11., 11:30 (+1:00)	0.8 TWh
Wind	21.3 GW	09.11., 10:30 (+1:00)	4.3 TWh
Conventional > 100 MW	62.7 GW	26.11., 18:00 (+1:00)	34.8 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform /

Electricity Production in Germany: December 2013

Actual production



	max. power	date max. power	monthly energy
Solar	11.0 GW	16.12., 12:15 (+1:00)	0.8 TWh
Wind	26.3 GW	05.12., 18:15 (+1:00)	7.5 TWh
Conventional > 100 MW	63.4 GW	17.12., 17:00 (+1:00)	32.1 TWh

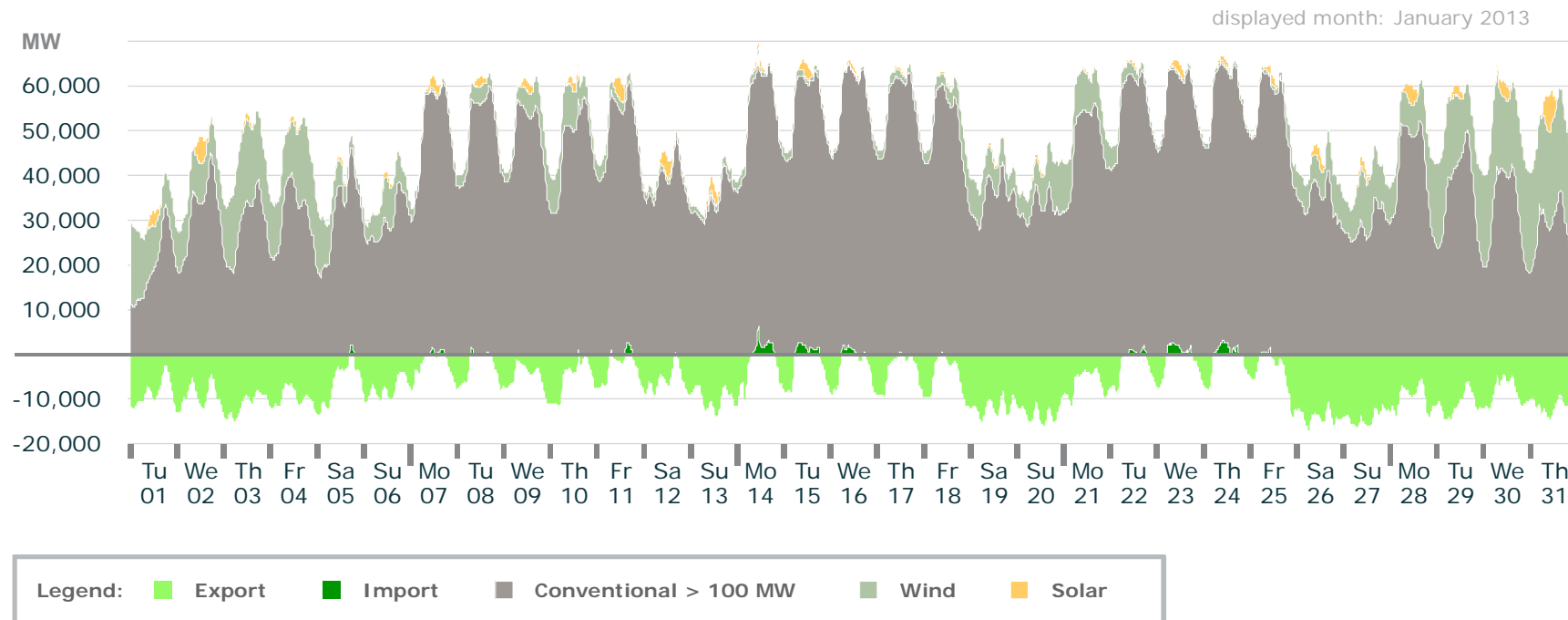
Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform /

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Electricity Production in Germany: January 2013

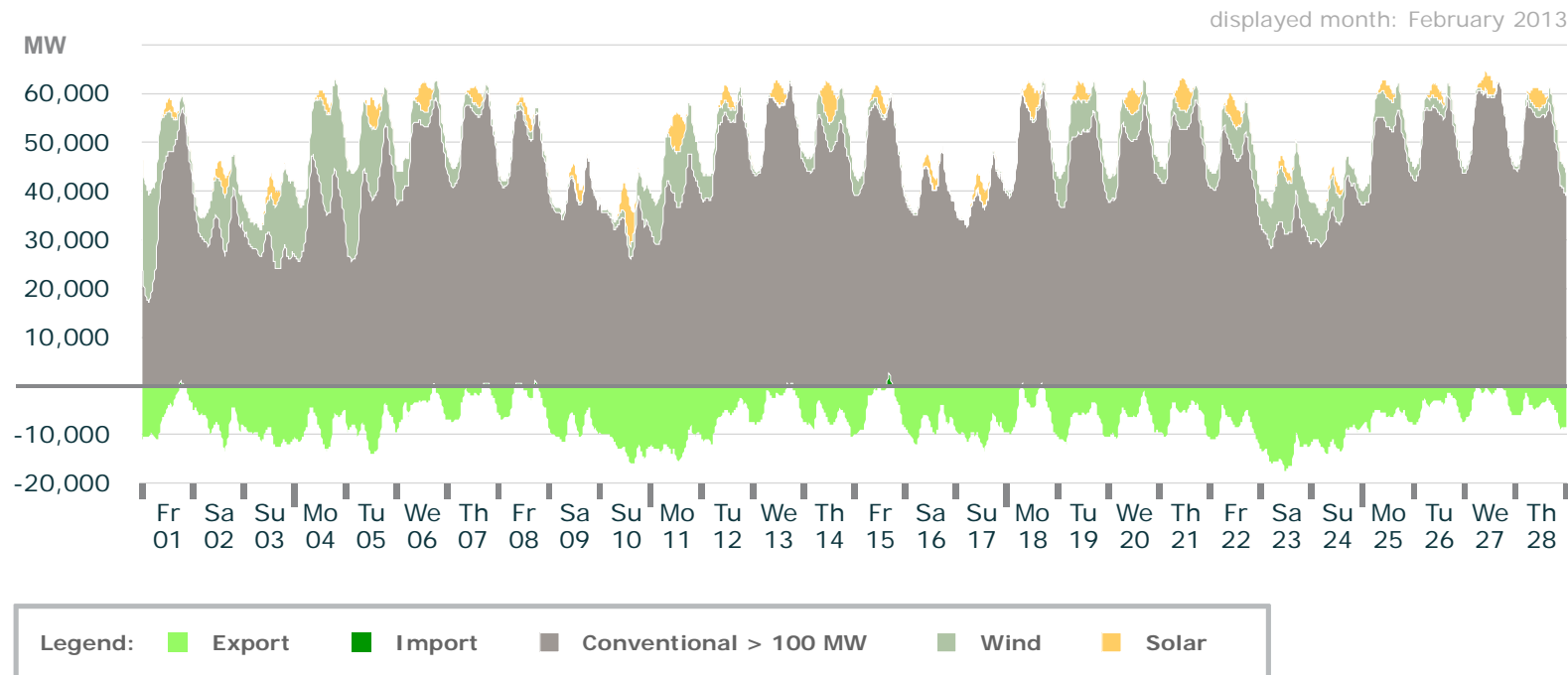
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform; Entso-e

Electricity Production in Germany: February 2013

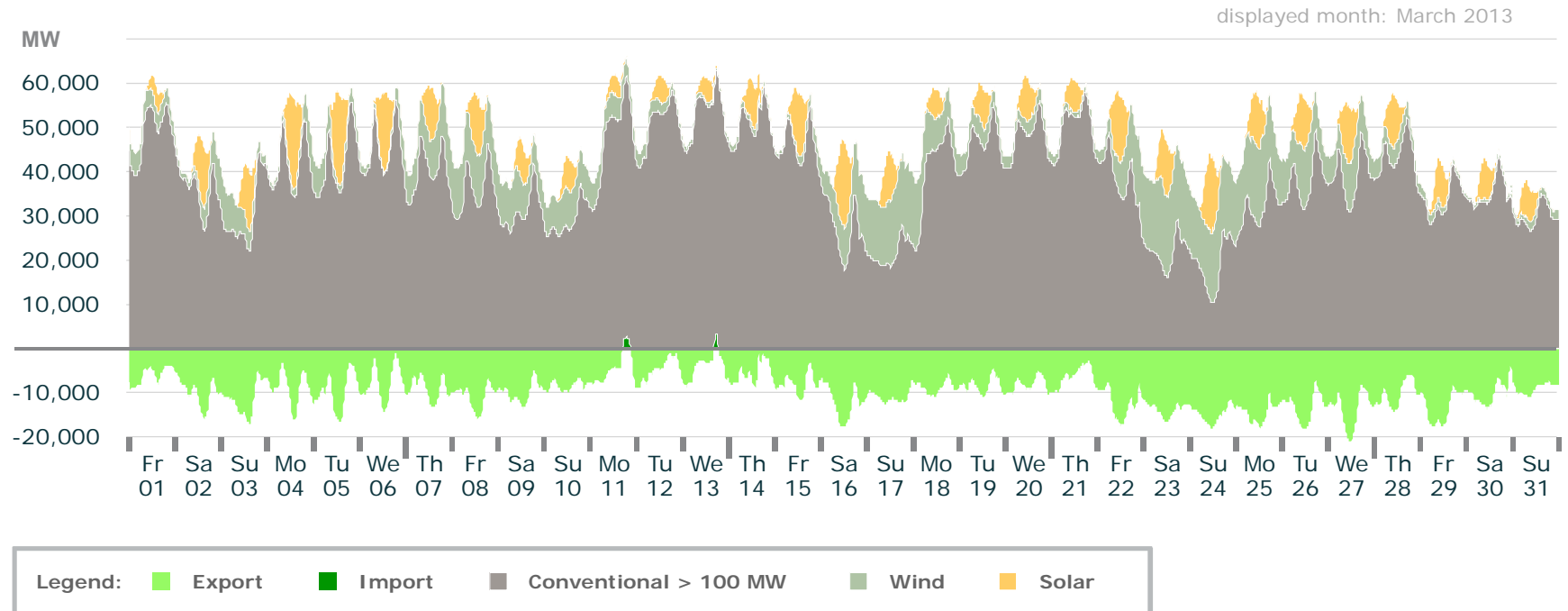
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform; Entso-e

Electricity Production in Germany: March 2013

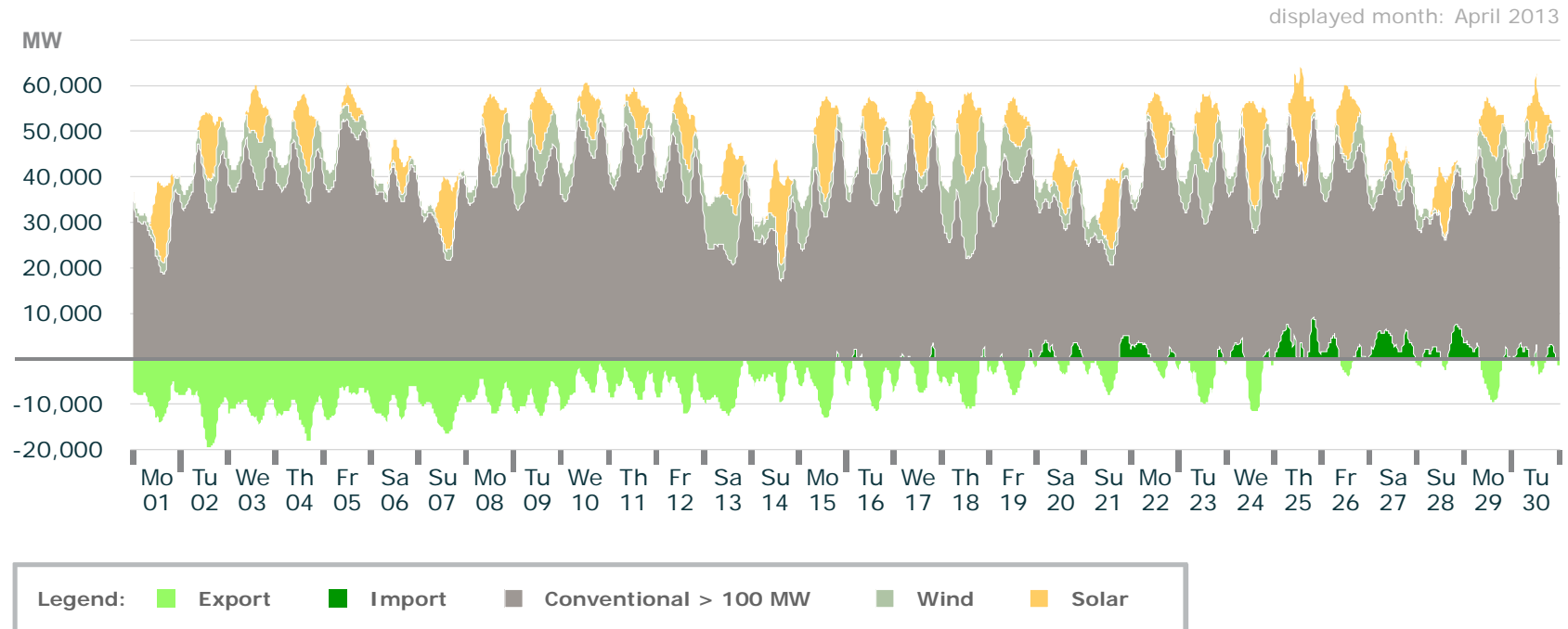
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform; Entso-e

Electricity Production in Germany: April 2013

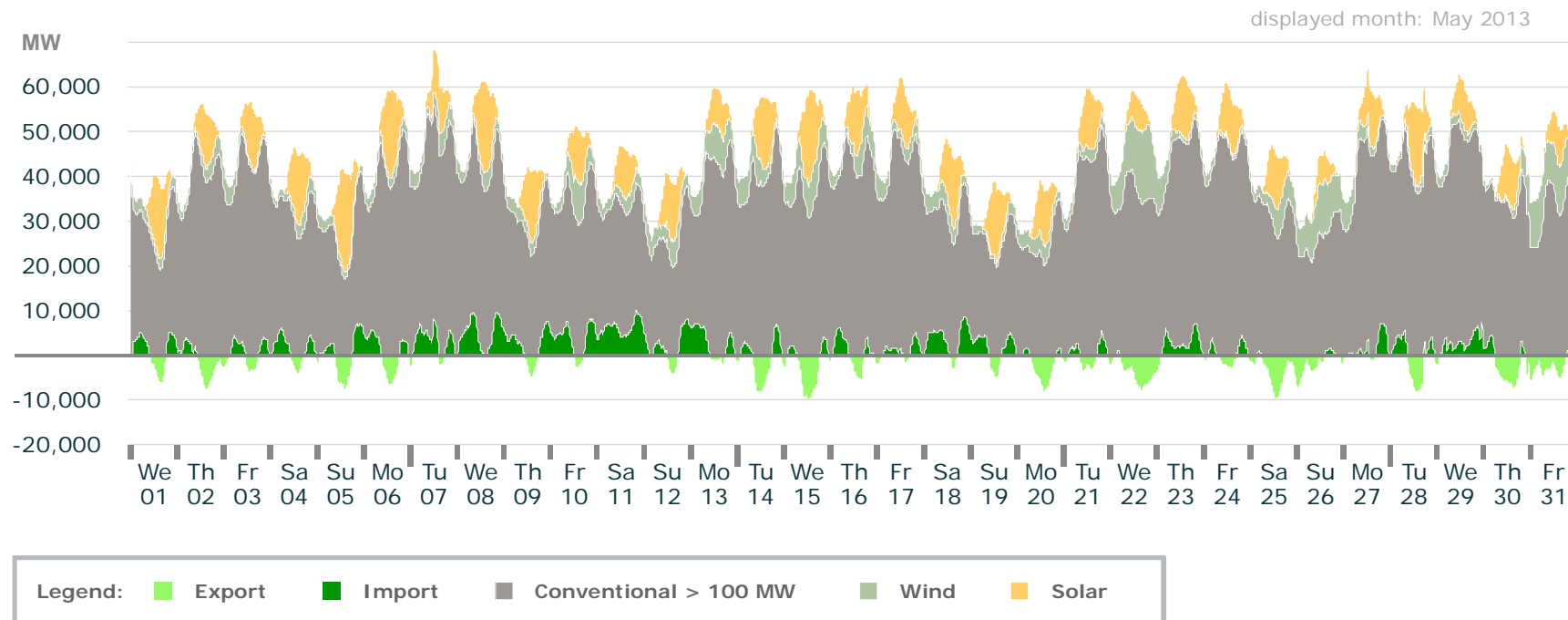
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform; Entso-e

Electricity Production in Germany: May 2013

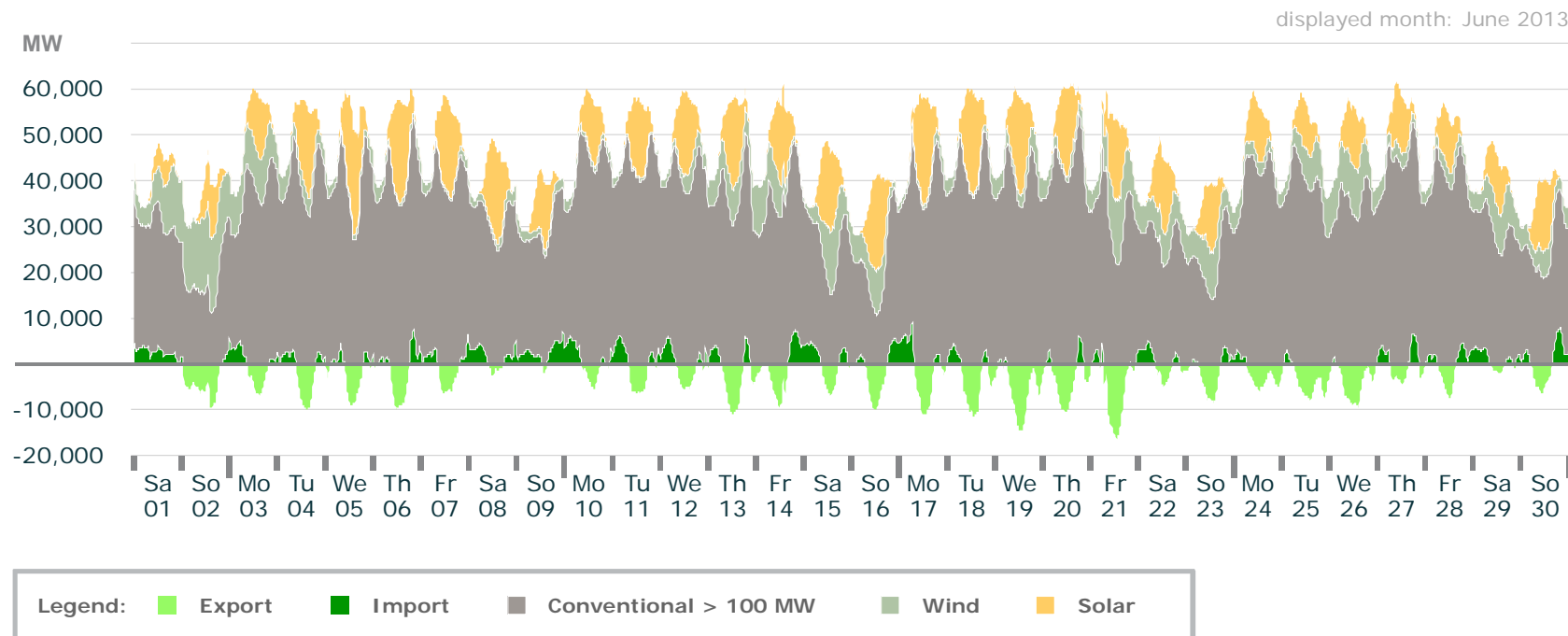
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform; Entso-e

Electricity Production in Germany: June 2013

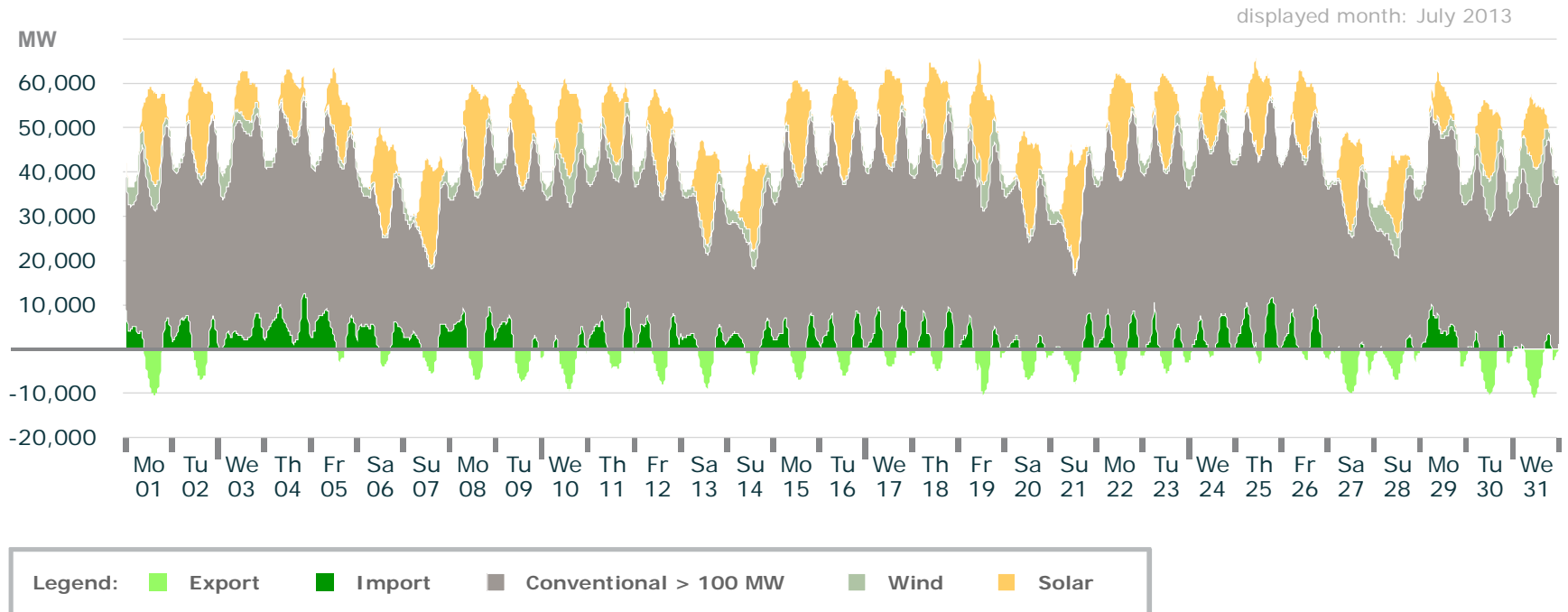
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform; Entso-e

Electricity Production in Germany: July 2013

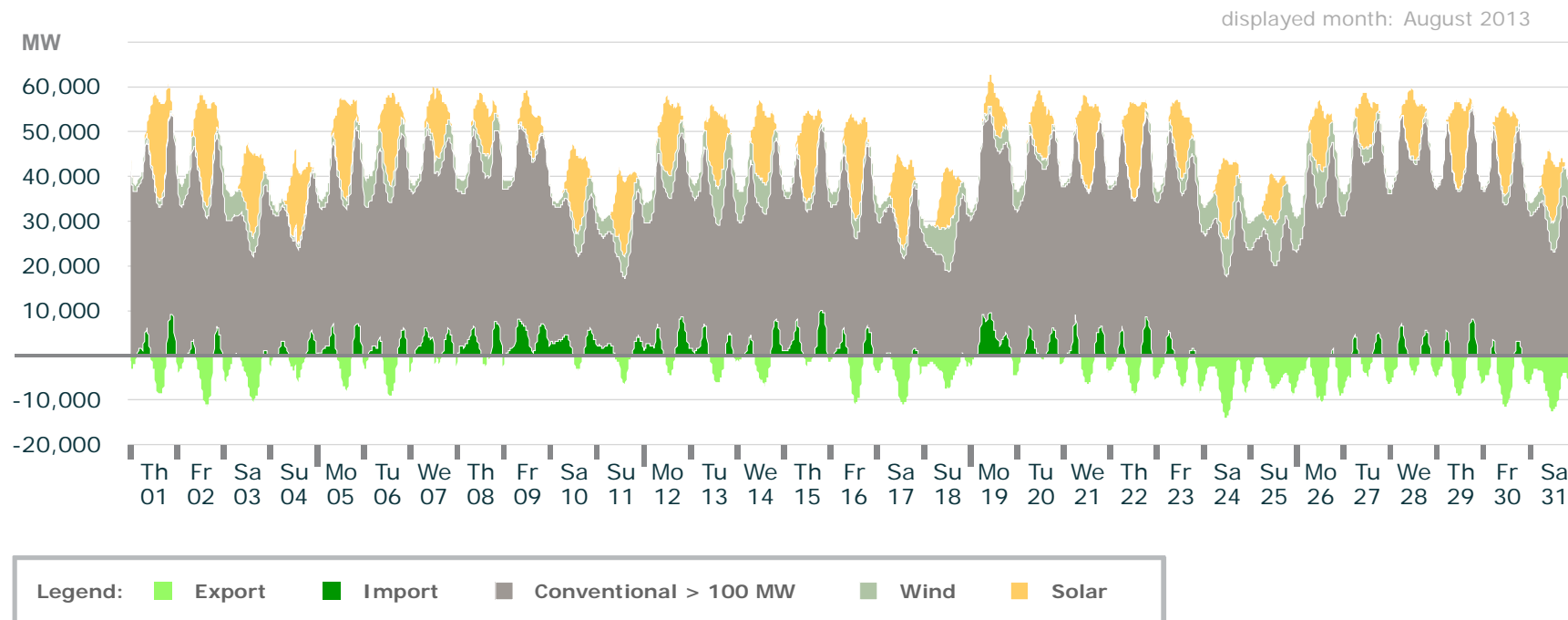
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform; Entso-e

Electricity Production in Germany: August 2013

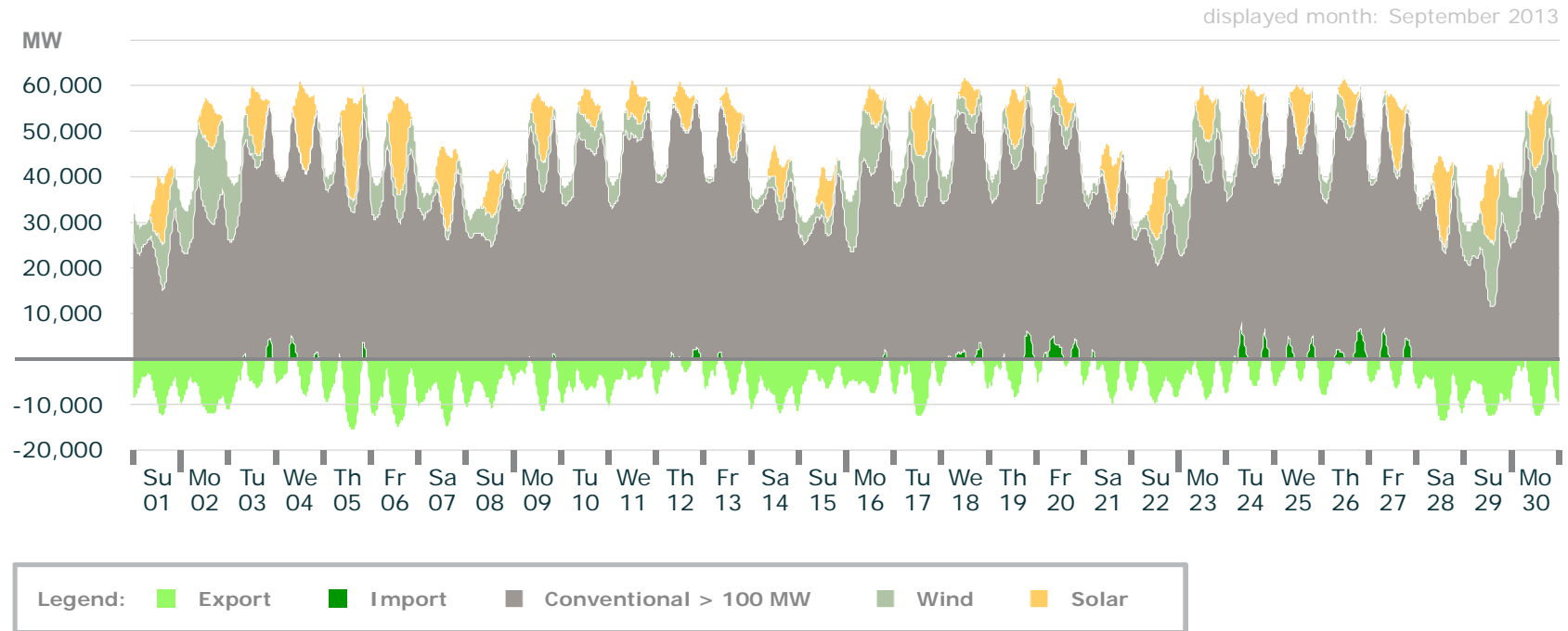
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform; Entso-e

Electricity Production in Germany: September 2013

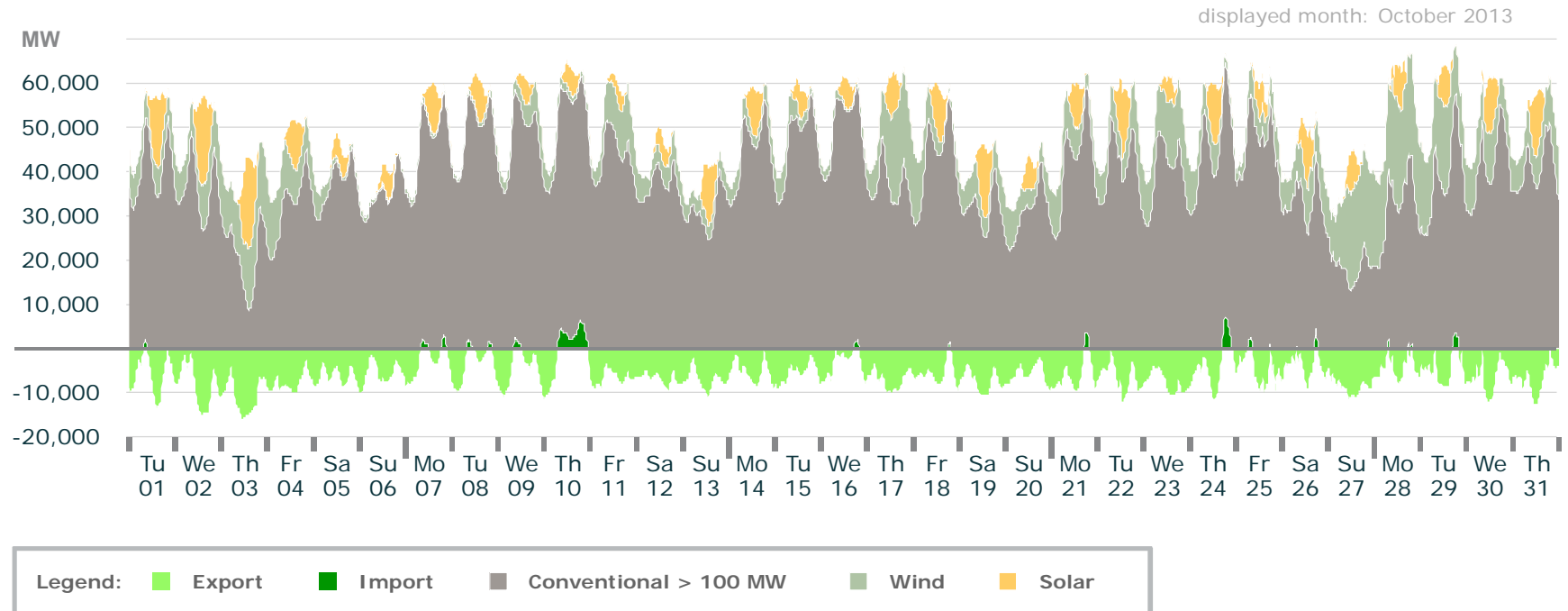
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform; Entso-e

Electricity Production in Germany: October 2013

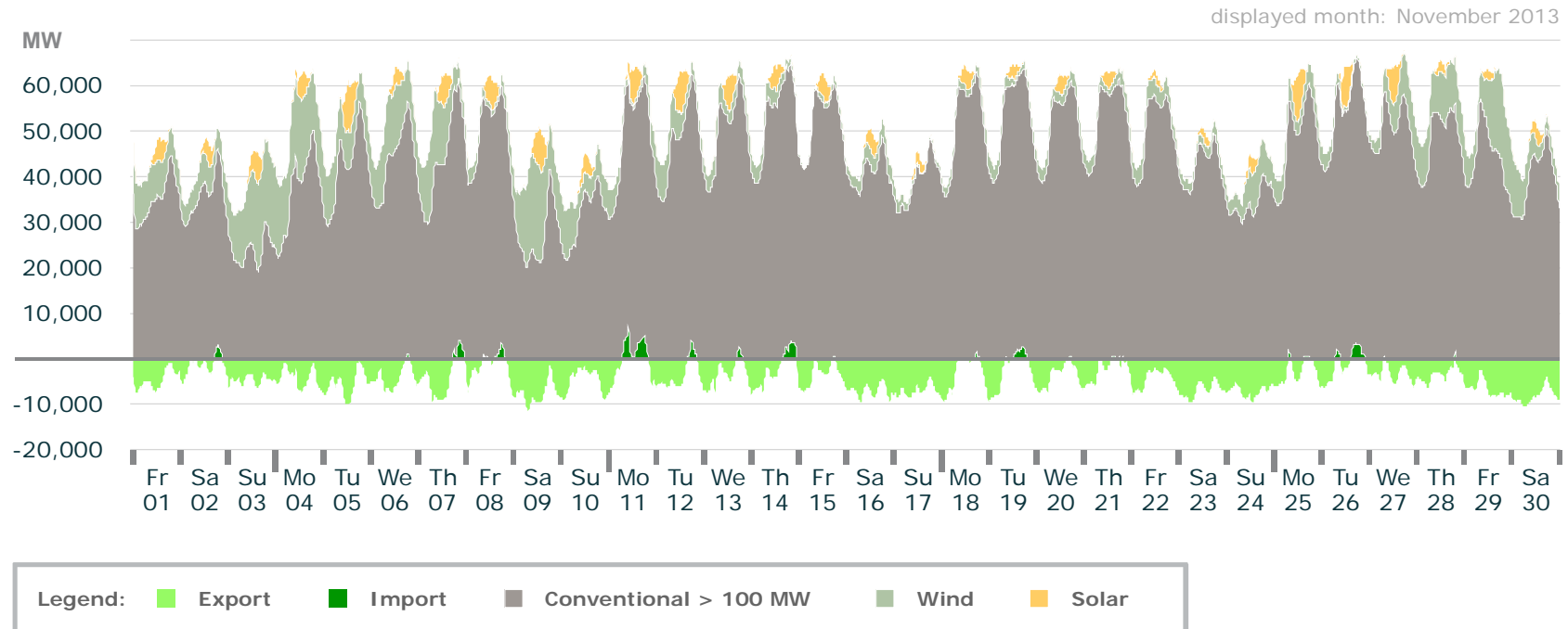
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform; Entso-e

Electricity Production in Germany: November 2013

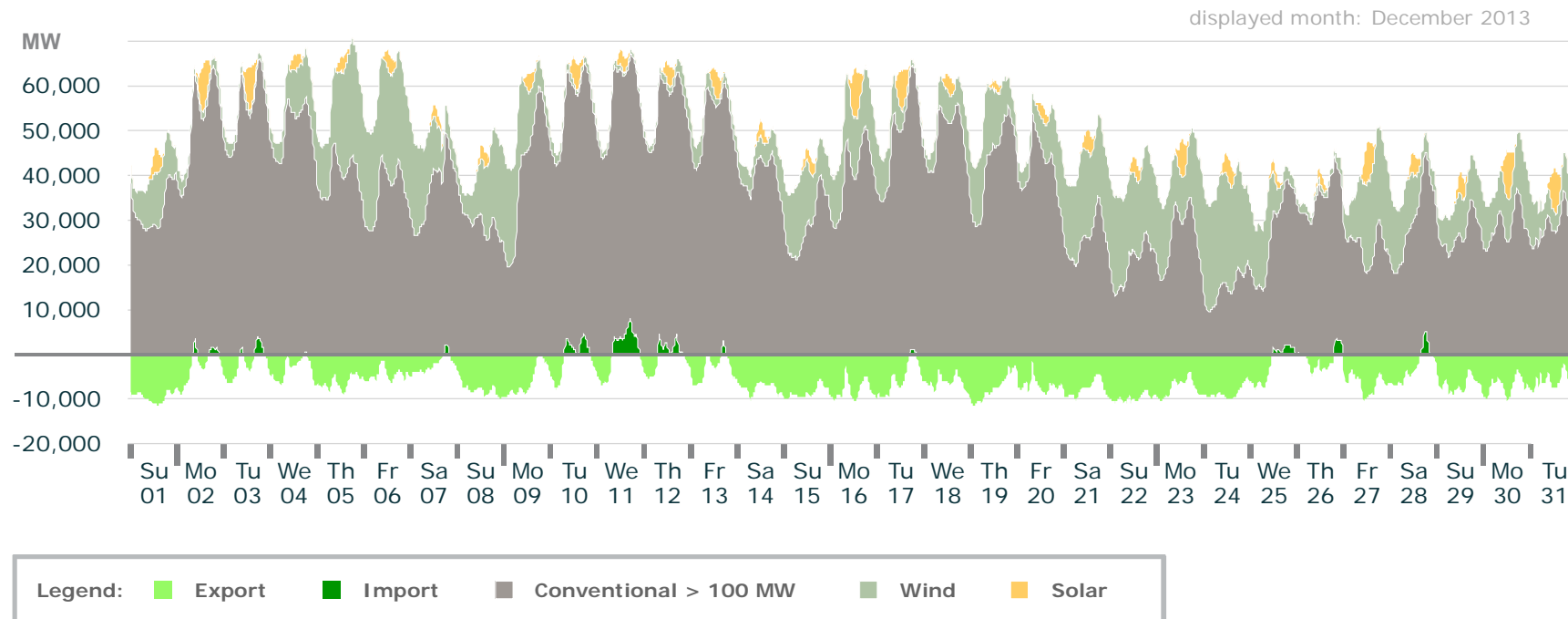
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform; Entso-e

Electricity Production in Germany: December 2013

Actual production



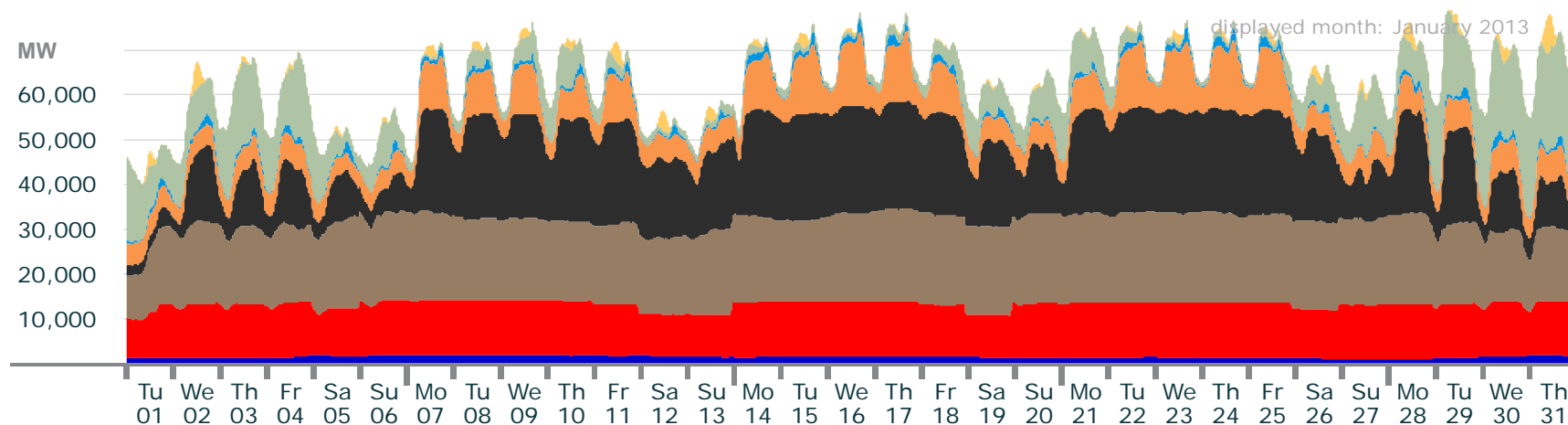
Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform; Entso-e

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Detailed Electricity Production: January 2013

Actual production



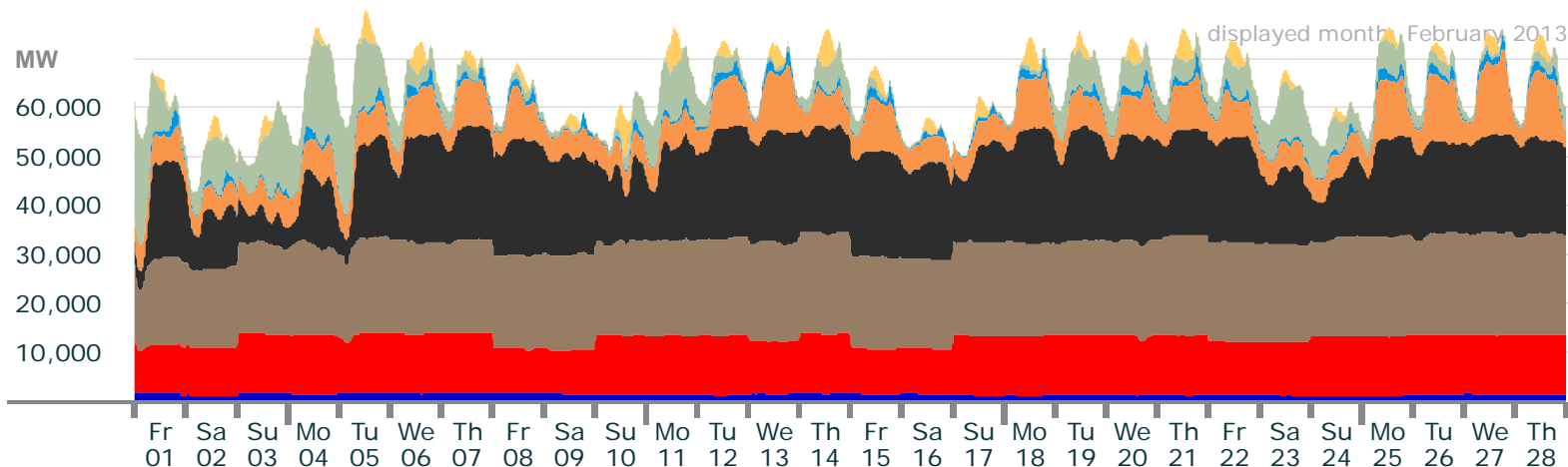
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.4	8.5	8.9	2.1	3.7	0	0.3	0
max. power (GW)	2.7	12.2	19.6	21.5	17.4	3.6	23.3	8.4
monthly energy (TWh)	1.5	8.9	12.9	11.2	5.5	0.6	5.0	0.3

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform and German Federal Statistical Office

Detailed Electricity Production: February 2013

Actual production



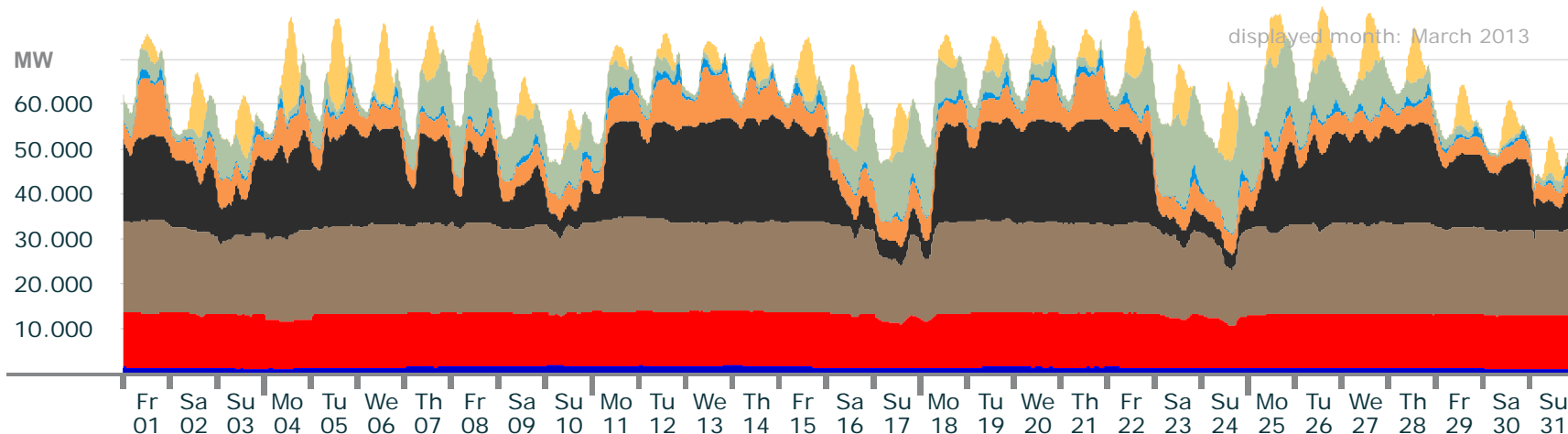
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.2	8.7	11.8	3.5	4.2	0	0.1	0
max. power (GW)	2.2	12.2	20.1	21.7	18.8	4.5	22.8	8.4
monthly energy (TWh)	1.1	8.1	12.4	10.9	5.0	0.6	3.2	0.7

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform and German Federal Statistical Office

Detailed Electricity Production: March 2013

Actual production



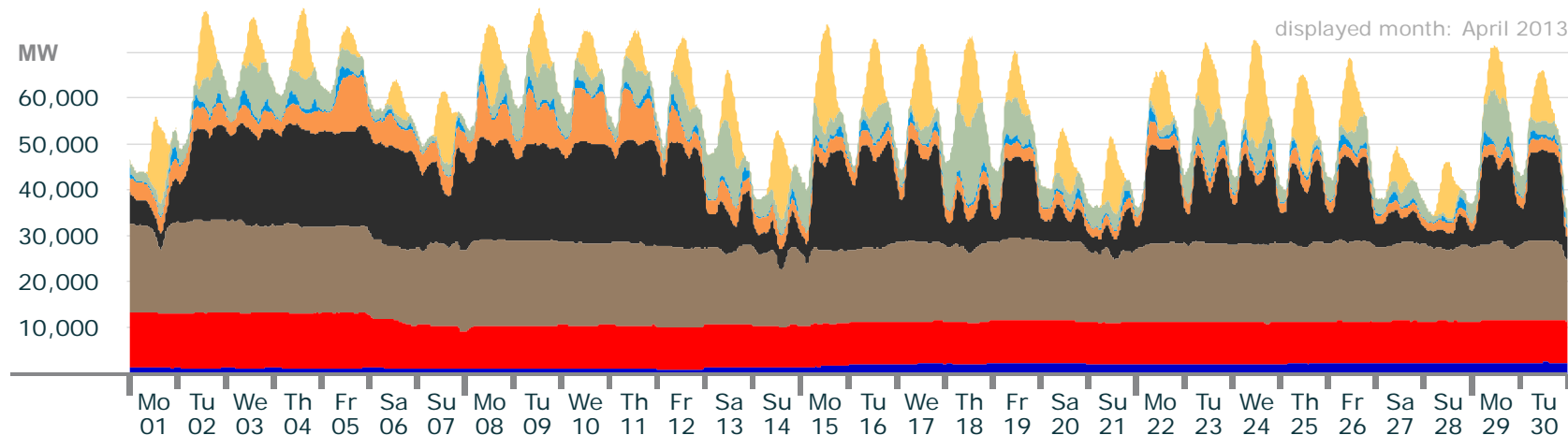
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.3	9.3	11.9	2.9	2.8	0	0.3	0
max. power (GW)	2.5	12.2	20.1	21.3	14.8	4.4	19.5	20.7
monthly energy (TWh)	1.4	8.9	13.5	10.4	4.5	0.6	4.7	2.3

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform and German Federal Statistical Office

Detailed Electricity Production: April 2013

Actual production

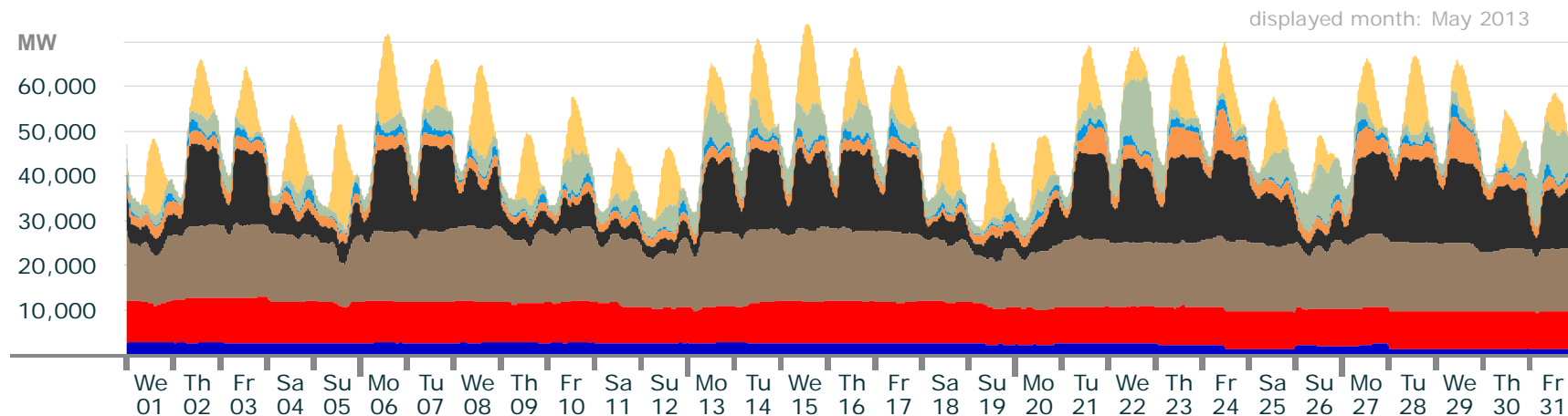


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	0.9	8.0	11.7	3.1	1.8	0	0.2	0
max. power (GW)	2.8	12.0	19.1	21	14.4	3.6	18.3	23.1
monthly energy (TWh)	1.4	7.0	11.8	9.7	3.2	0.6	3.3	3.2

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform and German Federal Statistical Office

Detailed Electricity Production: May 2013

Actual production



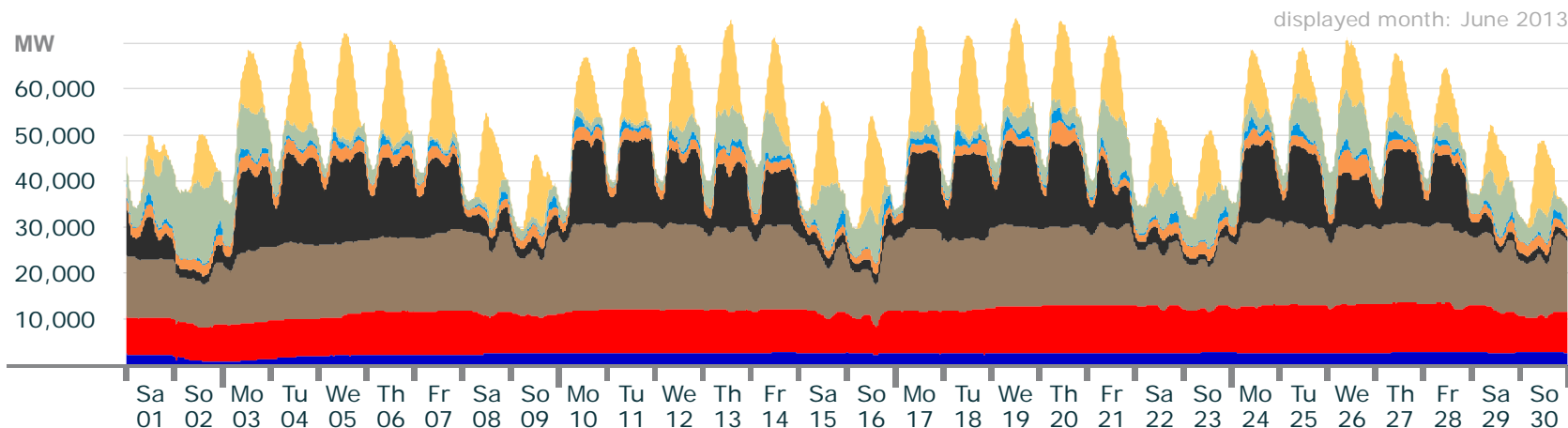
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.5	6.9	9.6	2.4	1.1	0	0.5	0
max. power (GW)	3.0	10.1	16.8	19.5	9.8	3.9	16.6	22.1
monthly energy (TWh)	2.0	6.4	10.9	8.2	2.1	0.6	2.8	3.5

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform and German Federal Statistical Office

Detailed Electricity Production: June 2013

Actual production



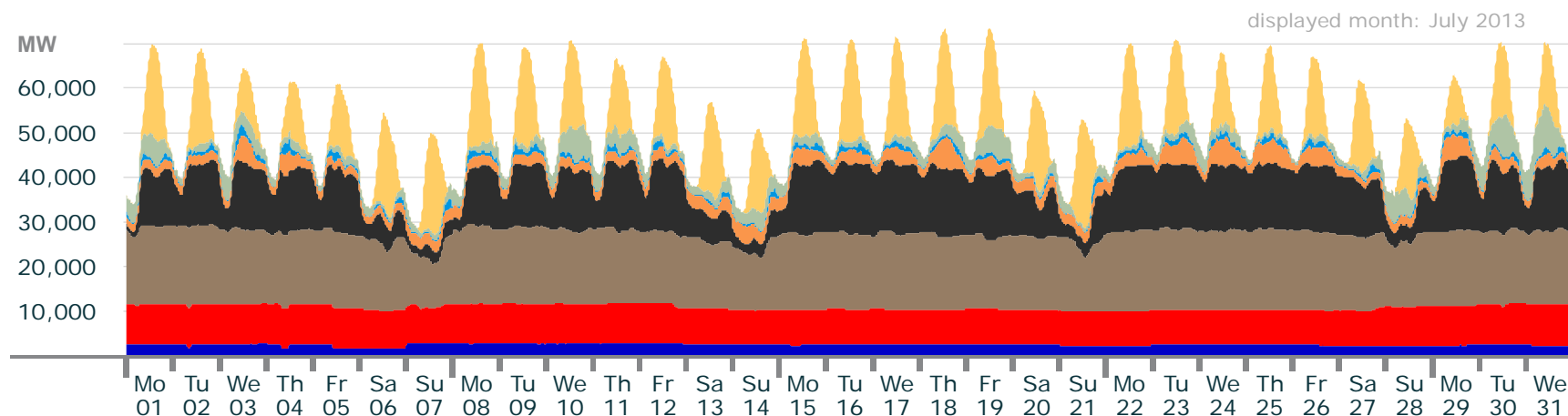
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	0.9	5.9	9.1	1.1	1.2	0	0.2	0
max. power (GW)	3.0	10.5	19.0	19.6	5.4	3.3	16.8	23.2
monthly energy (TWh)	1.8	6.7	11.3	7.1	1.6	0.6	3.4	4.3

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform and German Federal Statistical Office

Detailed Electricity Production: July 2013

Actual production



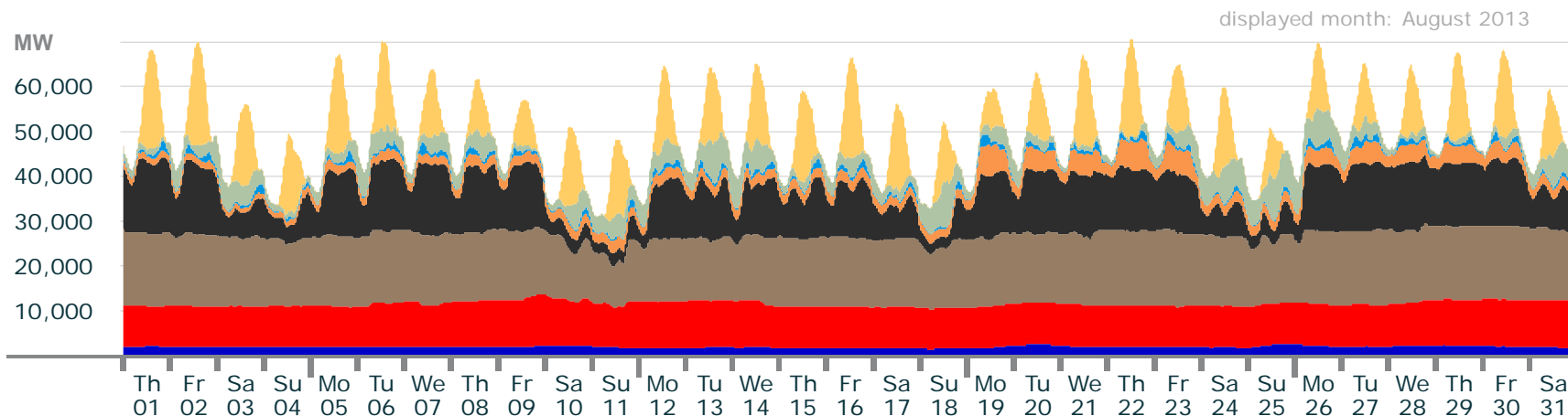
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.6	7.4	10.0	1.0	1.3	0	0.2	0
max. power (GW)	2.9	9.1	18.4	16.6	7.3	2.7	9.7	24.0
monthly energy (TWh)	1.9	6.3	12.2	8.4	2.0	0.5	1.7	5.1

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform and German Federal Statistical Office

Detailed Electricity Production: August 2013

Actual production



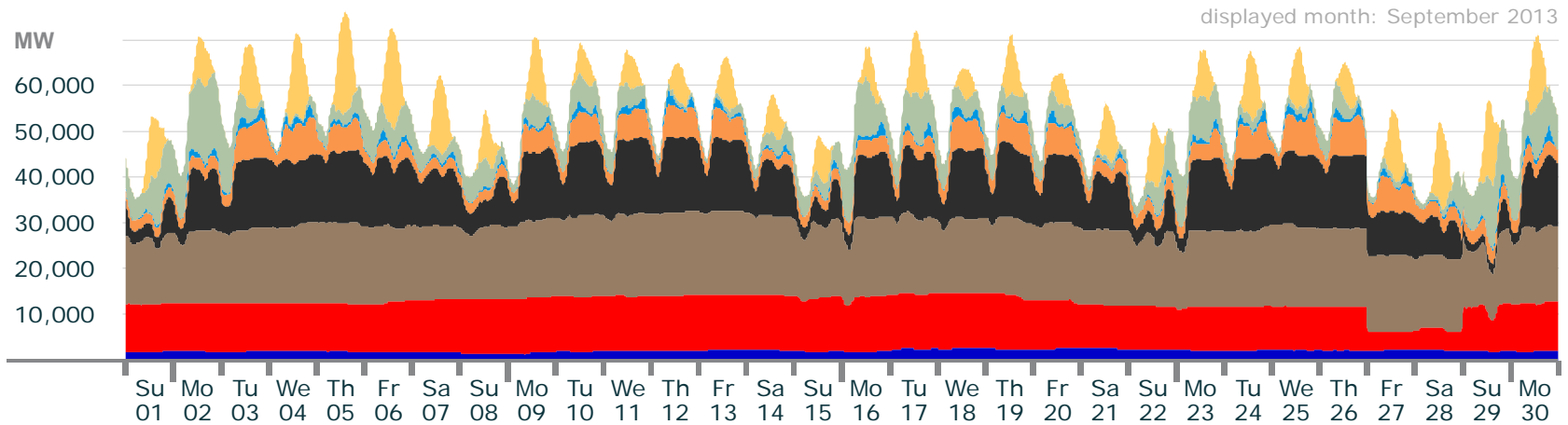
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.6	8.5	9.1	2.3	1	0	0.1	0
max. power (GW)	2.6	11.4	17.1	16.9	7.8	3.2	10.3	22.9
monthly energy (TWh)	1.5	7.2	11.3	7.9	2	0.5	2.3	4.1

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform and German Federal Statistical Office

Detailed Electricity Production: September 2013

Actual production



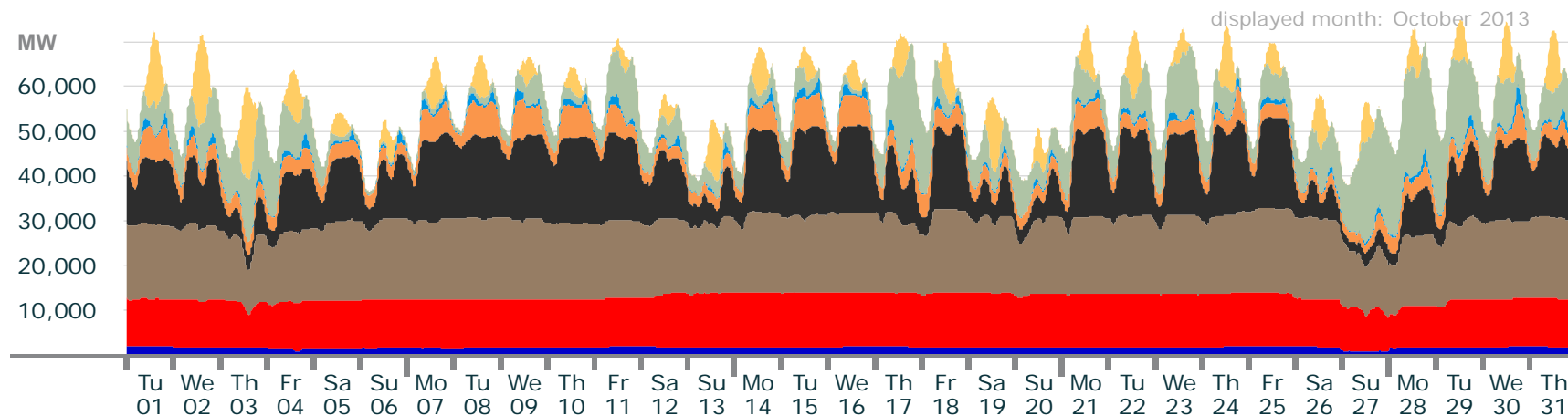
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.3	3.9	10.4	1.8	2.0	0	0.1	0
max. power (GW)	2.7	12.0	18.3	16.6	9.5	3.5	17.0	22.0
monthly energy (TWh)	1.5	7.6	11.8	8.1	2.9	0.5	3.4	2.6

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform and German Federal Statistical Office

Detailed Electricity Production: October 2013

Actual production

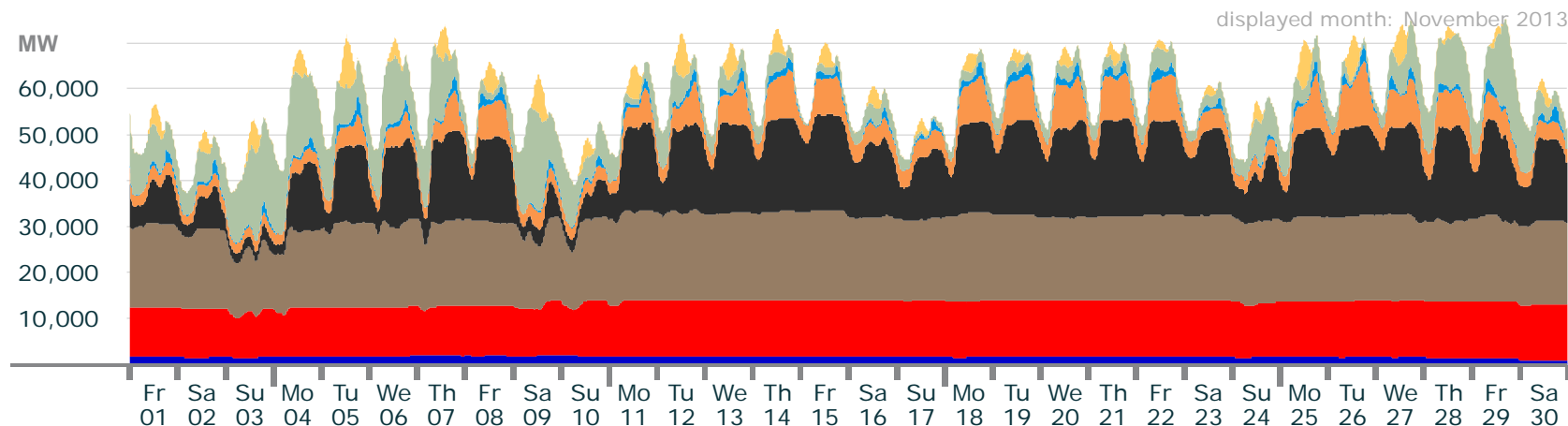


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	0.9	7.2	10.0	2.1	1.9	0	0.3	0
max. power (GW)	2.1	12.3	18.9	20.7	9.3	4.1	24.9	20.5
monthly energy (TWh)	1.3	8.3	12.4	9.3	2.8	0.5	5.5	1.9

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform and German Federal Statistical Office

Detailed Electricity Production: November 2013

Actual production



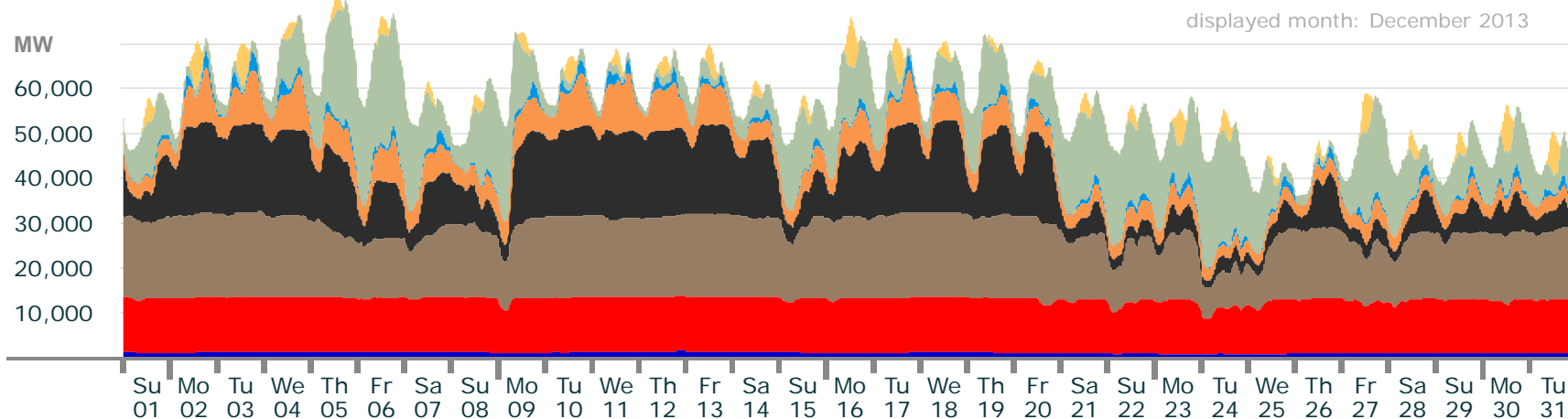
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	0.8	8.4	11.9	2.1	1.9	0	0.2	0
max. power (GW)	2.1	12.2	19.6	21.4	14.1	4.5	21.3	10.4
monthly energy (TWh)	1.3	8.4	12.9	10.1	3.6	0.6	4.3	0.8

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform and German Federal Statistical Office

Detailed Electricity Production: December 2013

Actual production



Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	0.9	7.9	6.7	1.7	2.4	0	0.9	0
max. power (GW)	1.7	12.2	19.1	20.6	13.1	4.5	26.3	11.0
monthly energy (TWh)	1.0	8.9	11.8	8.3	3.8	0.6	7.5	0.8

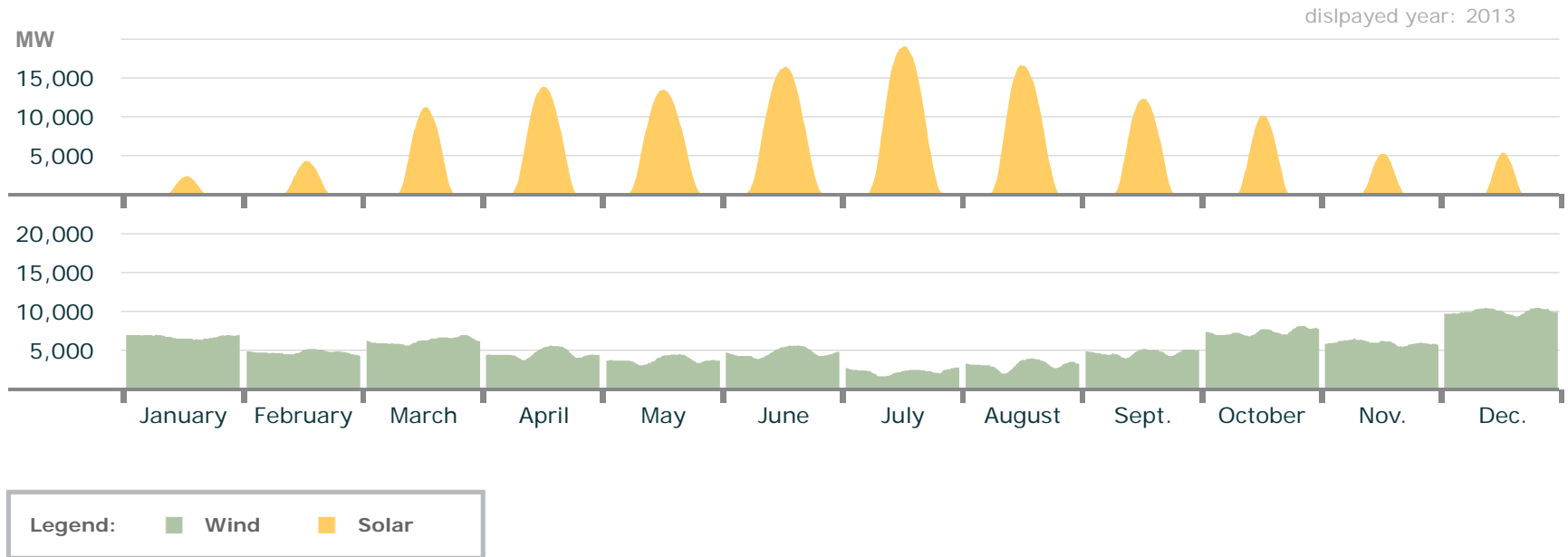
Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform and German Federal Statistical Office

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Diurnal courses 2013

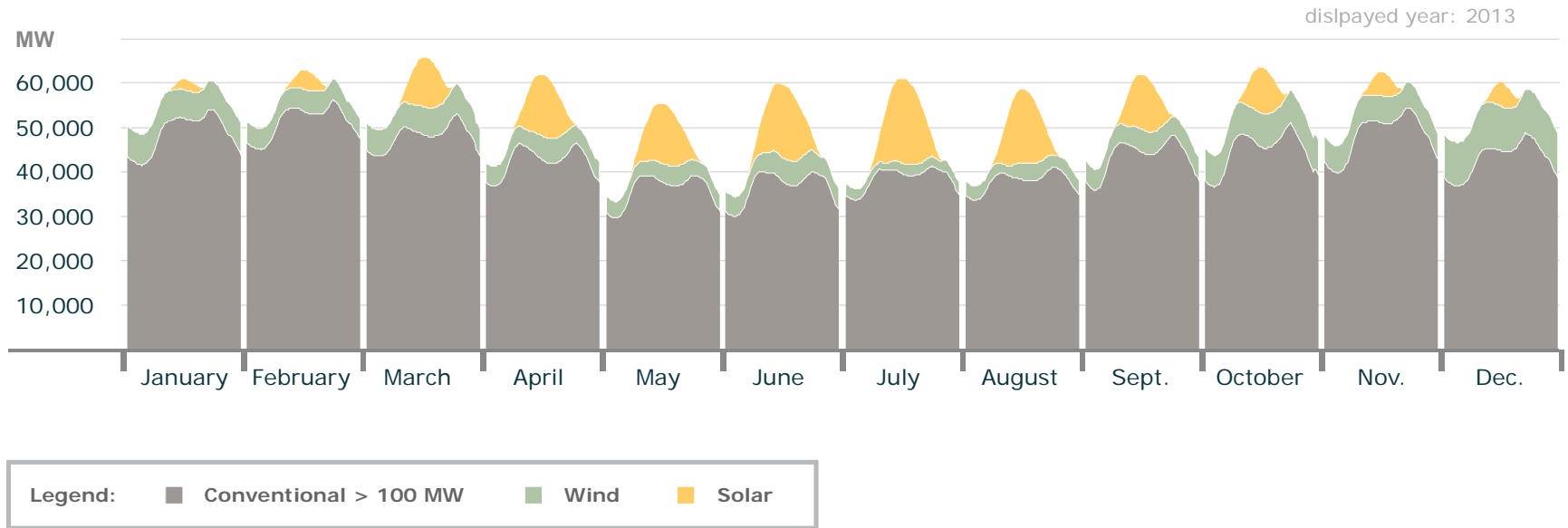
Diurnal courses



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform /

Diurnal courses 2013

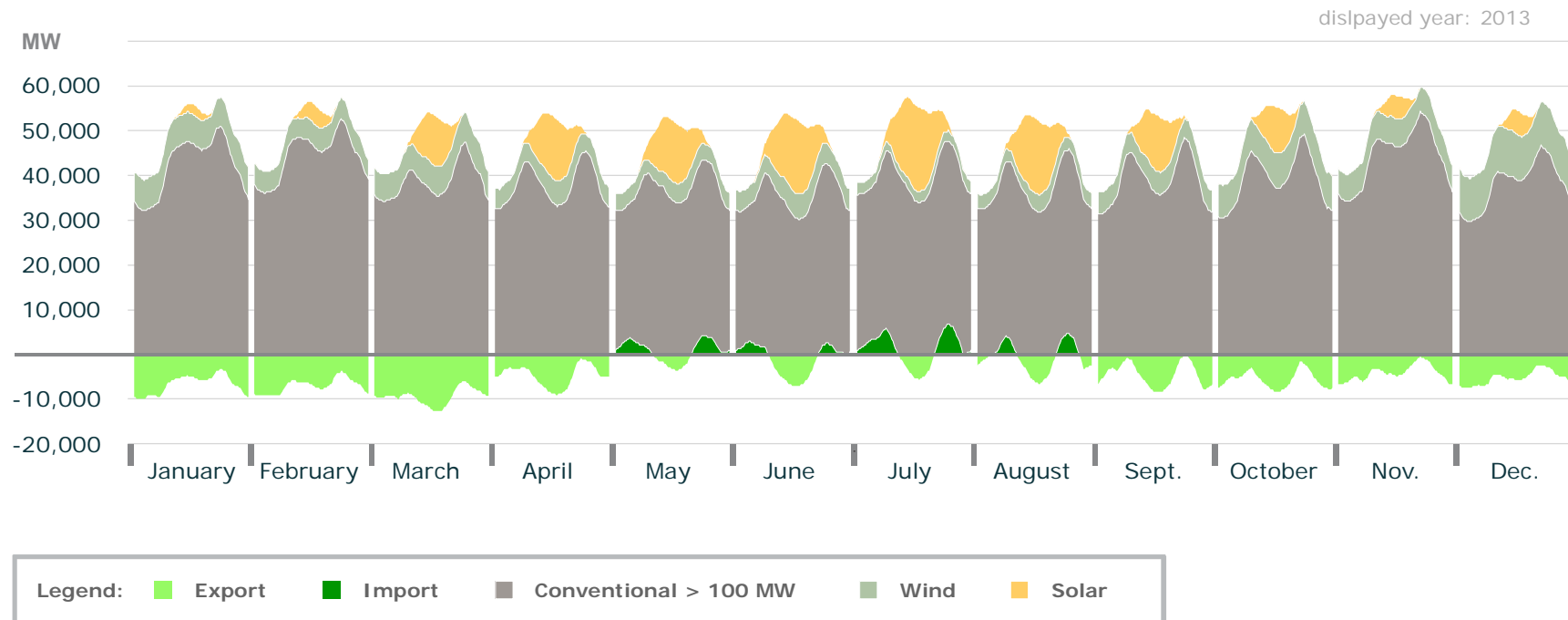
Diurnal courses



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform /

Diurnal courses 2013

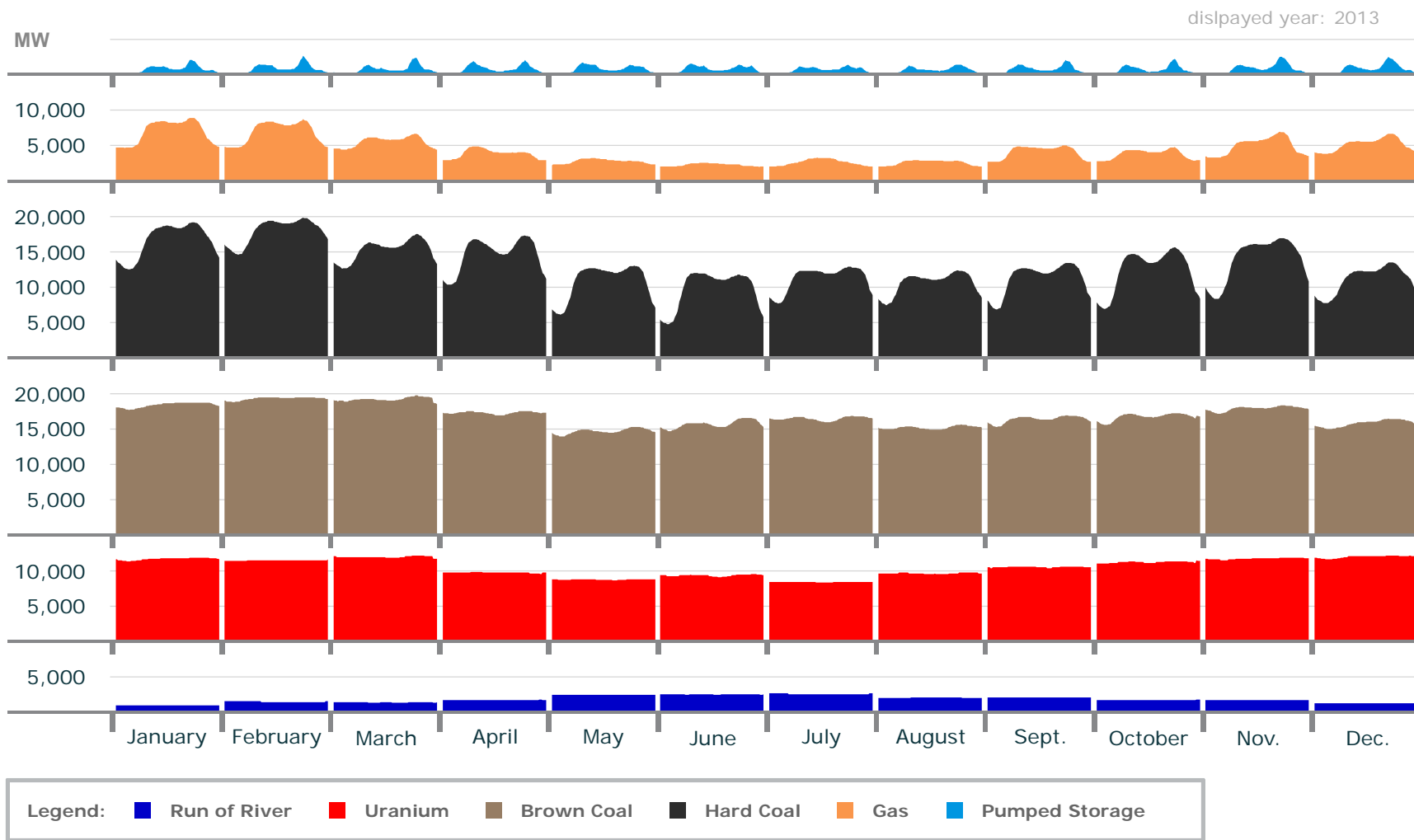
Diurnal courses



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform /

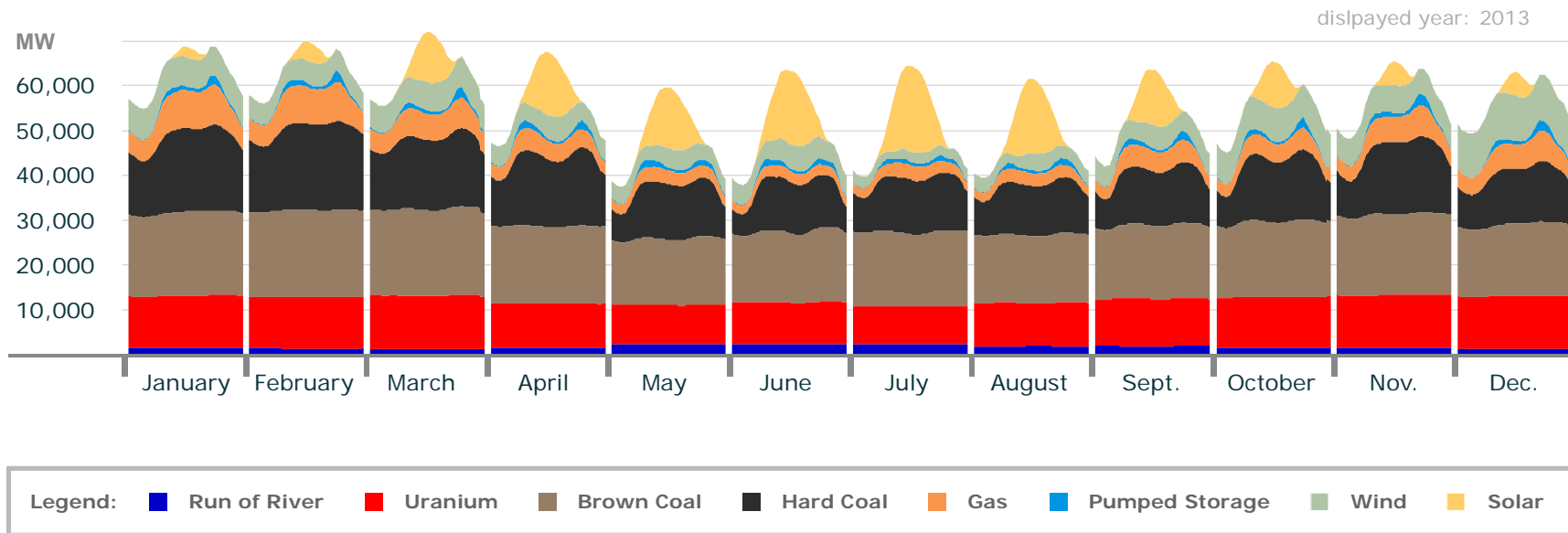
Diurnal courses 2013

Diurnal courses



Diurnal courses 2013

Diurnal courses



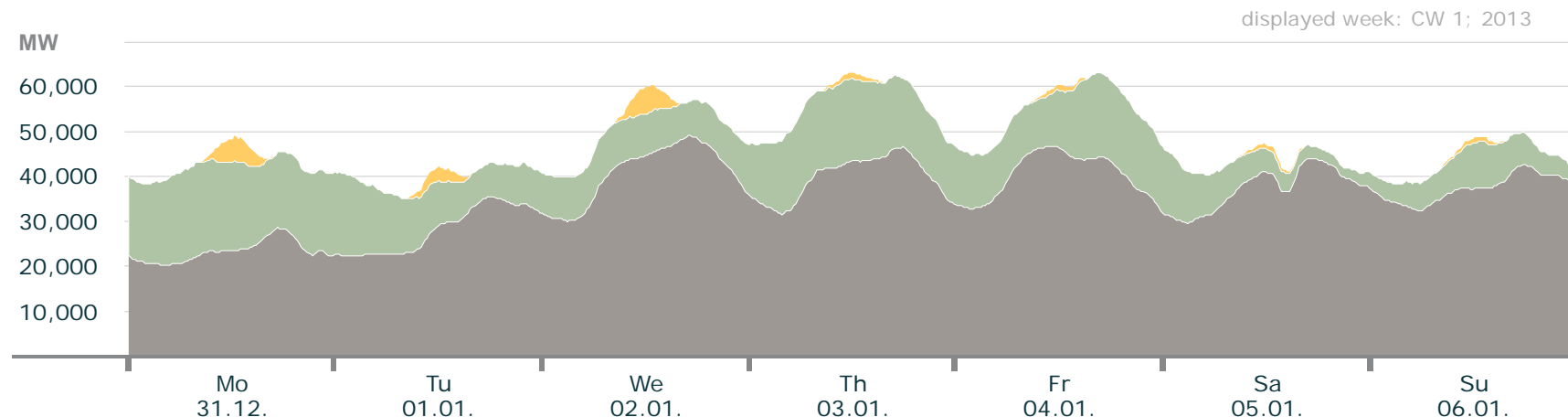
Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform /

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- Exemplary daily power curves

Electricity Production in Germany: Calendar Week 1

Actual production

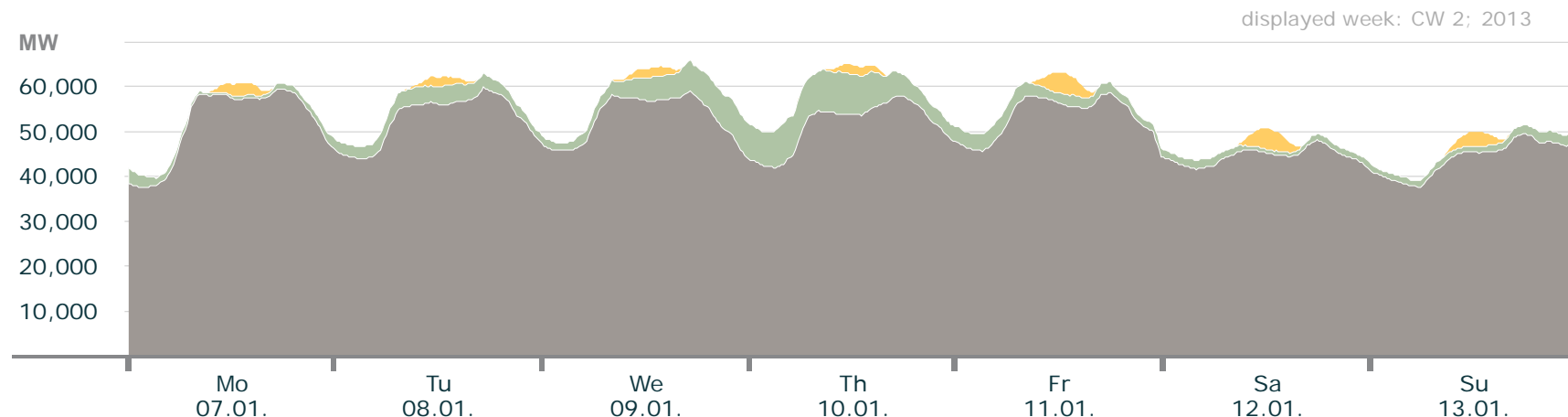


	max. power	date max. power	weekly energy
Solar	6.0 GW	02.01., 12:15 (+1:00)	0.09 TWh
Wind	20.9 GW	31.12., 07:45 (+1:00)	2.0 TWh
Conventional > 100 MW	49.2 GW	02.01., 17:00 (+1:00)	5.9 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 2

Actual production

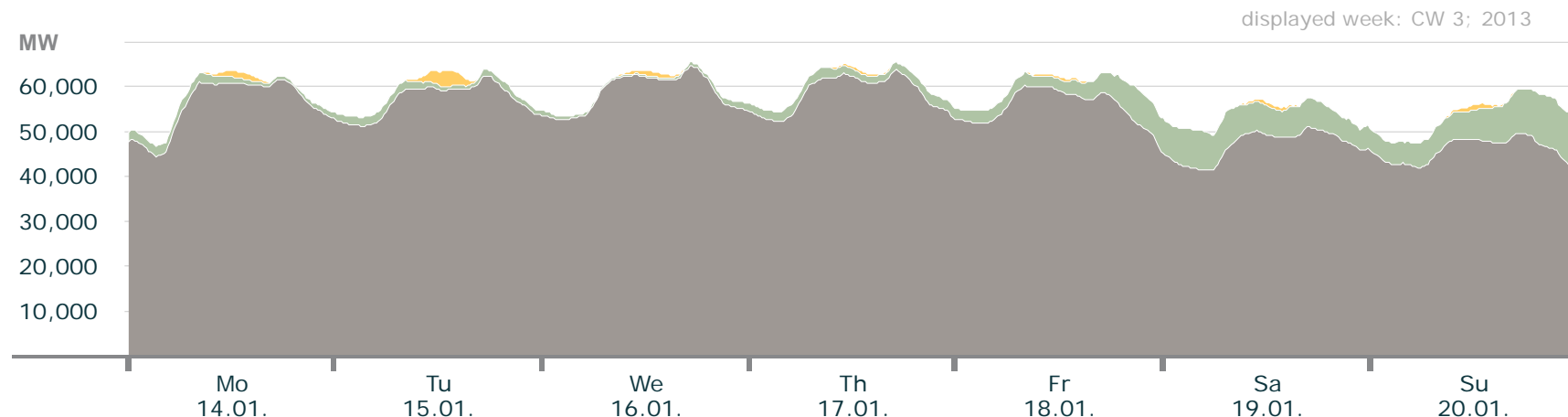


	max. power	date max. power	weekly energy
Solar	4.7 GW	11.01., 12:30 (+1:00)	0.1 TWh
Wind	9.6 GW	10.01., 08:45 (+1:00)	0.53 TWh
Conventional > 100 MW	59.8 GW	08.01., 17:00 (+1:00)	8.4 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 3

Actual production

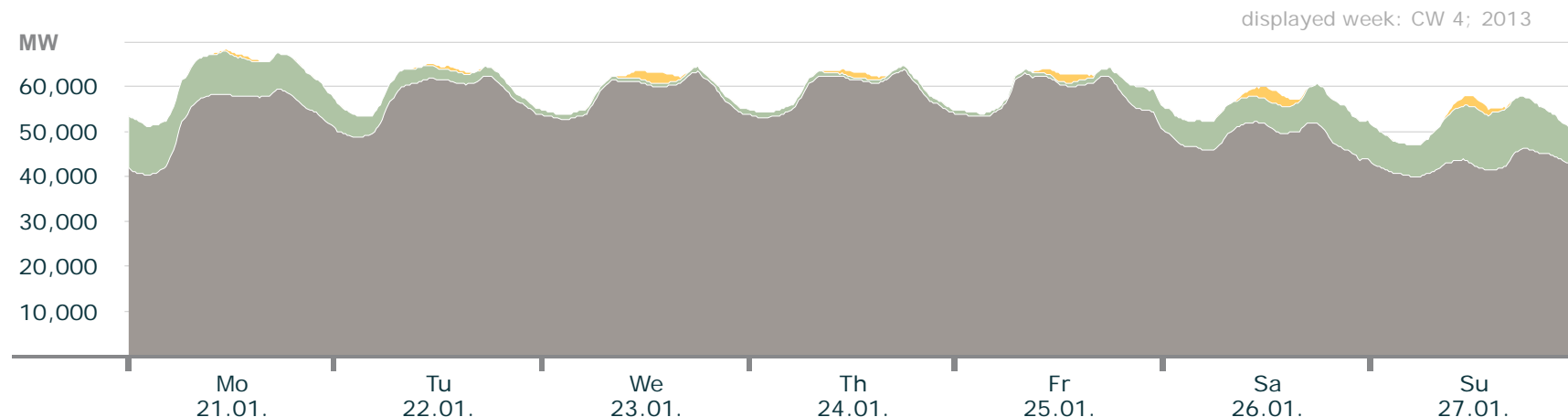


	max. power	date max. power	weekly energy
Solar	8.4 GW	18.01., 12:15 (+1:00)	0.14 TWh
Wind	21.8 GW	22.01., 07:45 (+1:00)	1.6 TWh
Conventional > 100 MW	60.3 GW	17.01., 18:00 (+1:00)	7.6 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 4

Actual production

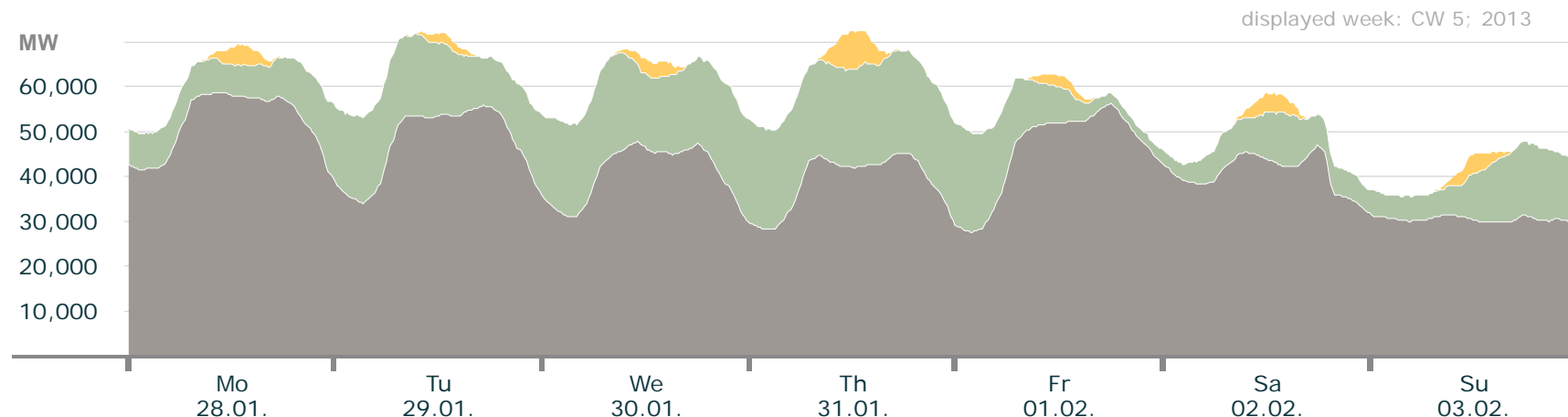


	max. power	date max. power	weekly energy
Solar	2.8 GW	26.01., 13:15 (+1:00)	0.06 TWh
Wind	12.9 GW	27.01., 12:30 (+1:00)	0.77 TWh
Conventional > 100 MW	64.0 GW	24.01., 18:00 (+1:00)	9.1 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 5

Actual production

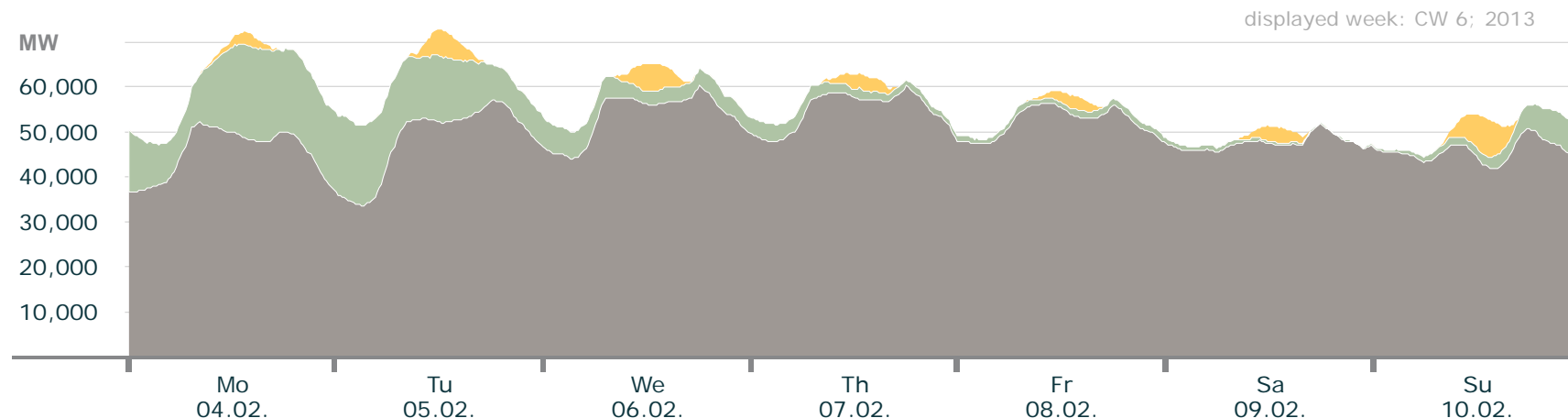


	max. power	date max. power	weekly energy
Solar	8.4 GW	31.01., 12:00 (+1:00)	0.14 TWh
Wind	23.3 GW	31.01., 18:30 (+1:00)	2.3 TWh
Conventional > 100 MW	58.9 GW	28.01., 10:00 (+1:00)	7.1 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 6

Actual production

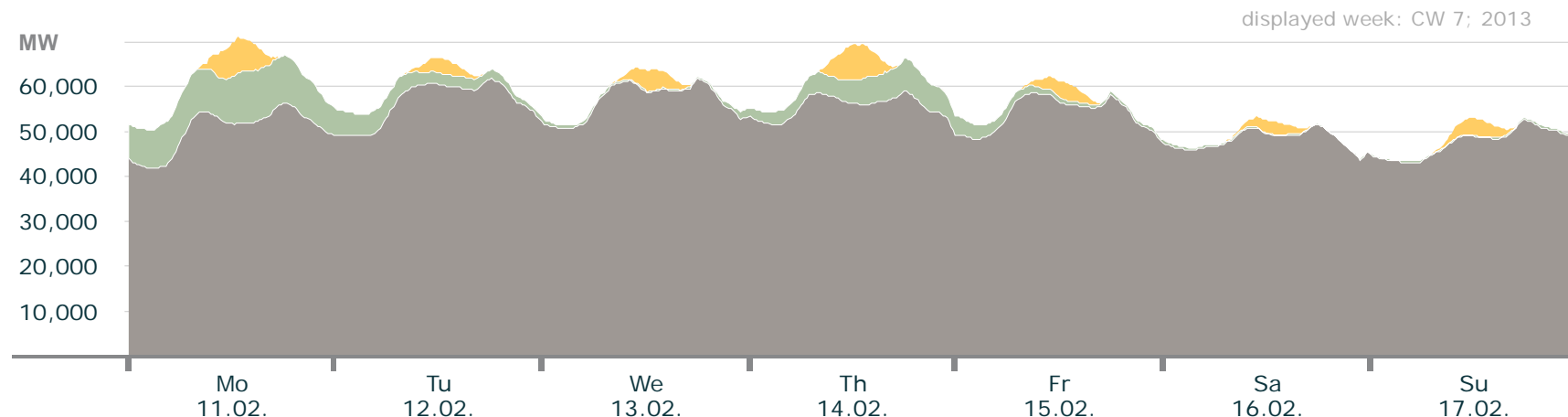


	max. power	date max. power	weekly energy
Solar	8.4 GW	10.02., 13:30 (+1:00)	0.16 TWh
Wind	21.0 GW	04.02., 13:15 (+1:00)	0.95 TWh
Conventional > 100 MW	60.5 GW	06.02., 18:00 (+1:00)	8.4 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 7

Actual production

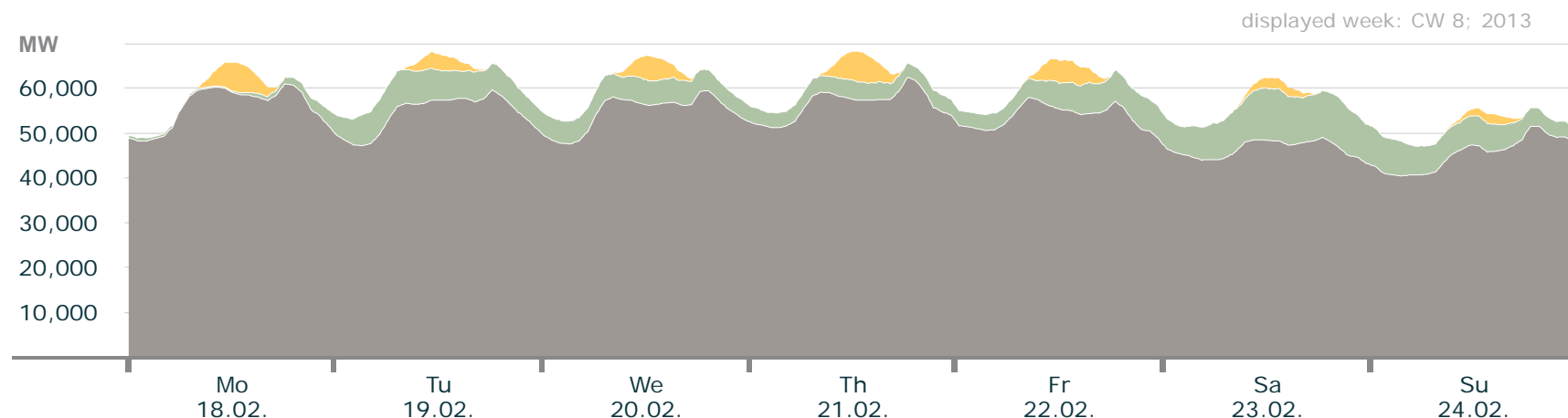


	max. power	date max. power	weekly energy
Solar	7.8 GW	14.02., 12:45 (+1:00)	0.18 TWh
Wind	11.7 GW	11.02., 14:15 (+1:00)	0.49 TWh
Conventional > 100 MW	62.1 GW	13.02., 18:00 (+1:00)	8.9 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 8

Actual production

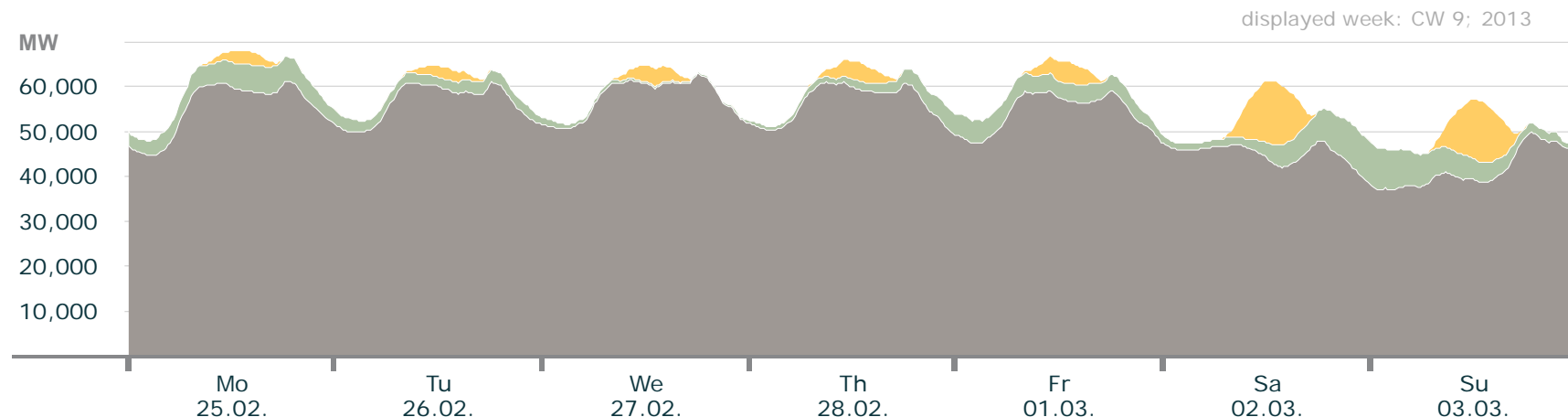


	max. power	date max. power	weekly energy
Solar	6.7 GW	21.02., 12:30 (+1:00)	0.17 TWh
Wind	11.7 GW	23.02., 11:30 (+1:00)	0.88 TWh
Conventional > 100 MW	62.6 GW	21.02., 18:00 (+1:00)	8.8 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 9

Actual production

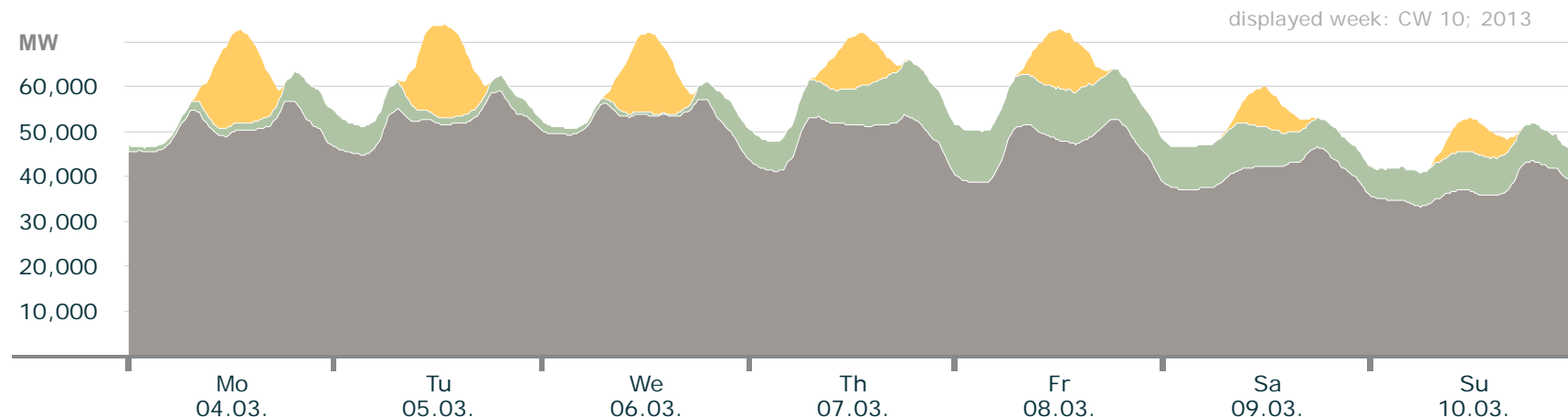


	max. power	date max. power	weekly energy
Solar	14.1 GW	02.03., 13:15 (+1:00)	0.27 TWh
Wind	9.6 GW	03.03., 00:15 (+1:00)	0.56 TWh
Conventional > 100 MW	63.0 GW	27.02., 18:00 (+1:00)	8.8 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 10

Actual production

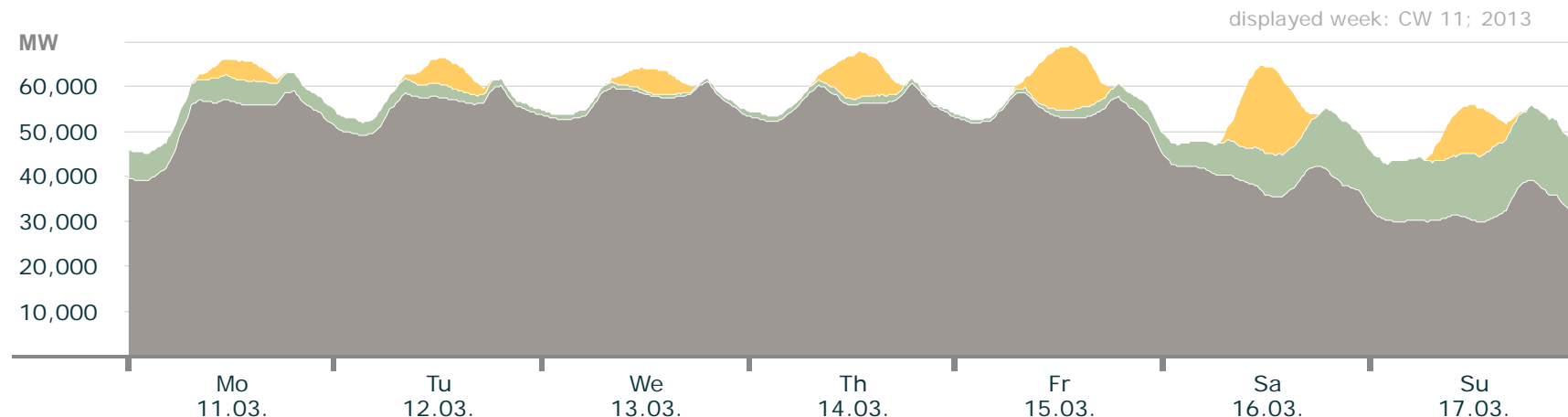


	max. power	date max. power	weekly energy
Solar	20.7 GW	05.03., 12:30 (+1:00)	0.63 TWh
Wind	12.6 GW	07.03., 19:00 (+1:00)	1.1 TWh
Conventional > 100 MW	59.2 GW	05.03., 19:00 (+1:00)	7.9 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 11

Actual production

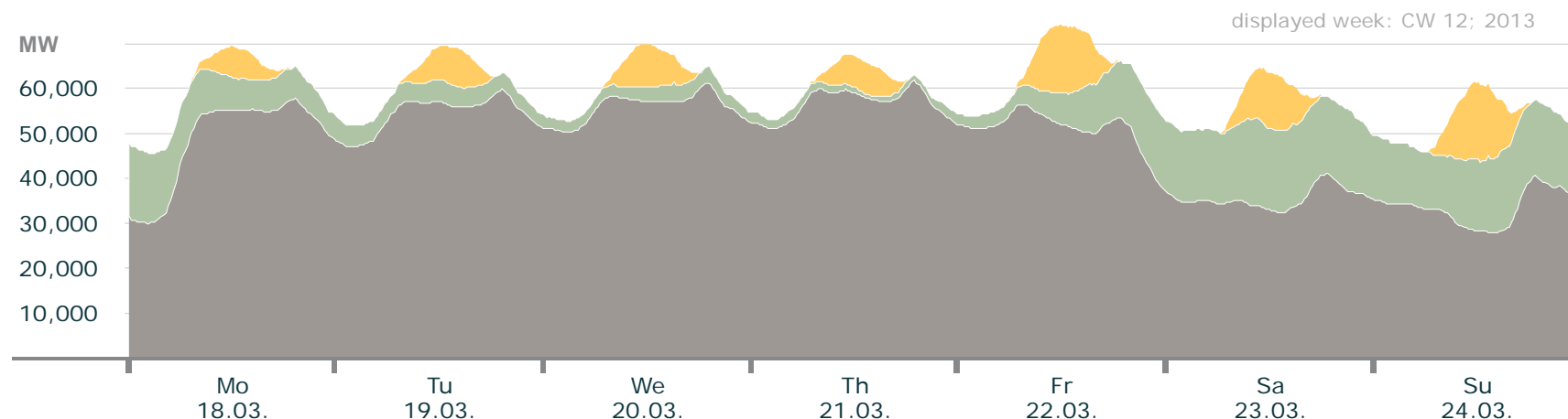


	max. power	date max. power	weekly energy
Solar	19.3 GW	16.03., 12:30 (+1:00)	0.45 TWh
Wind	17.0 GW	17.03., 21:30 (+1:00)	0.84 TWh
Conventional > 100 MW	61.2 GW	13.03., 19:00 (+1:00)	8.3 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 12

Actual production

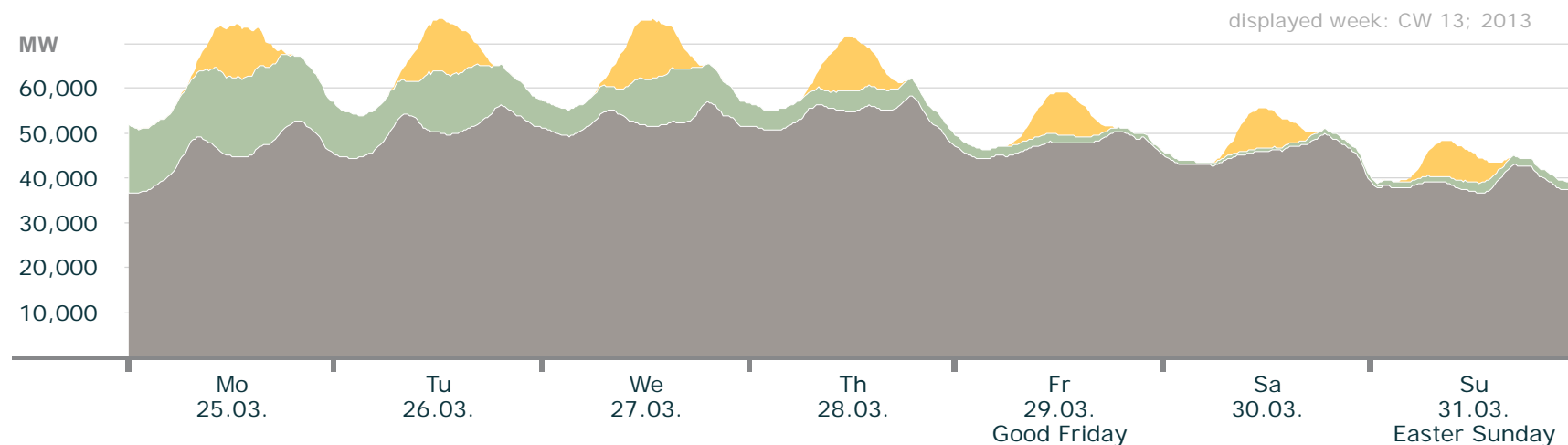


	max. power	date max. power	weekly energy
Solar	17.3 GW	24.03., 12:30 (+1:00)	0.51 TWh
Wind	19.5 GW	23.03., 10:30 (+1:00)	1.4 TWh
Conventional > 100 MW	62.0 GW	21.03., 19:00 (+1:00)	8.1 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 13

Actual production

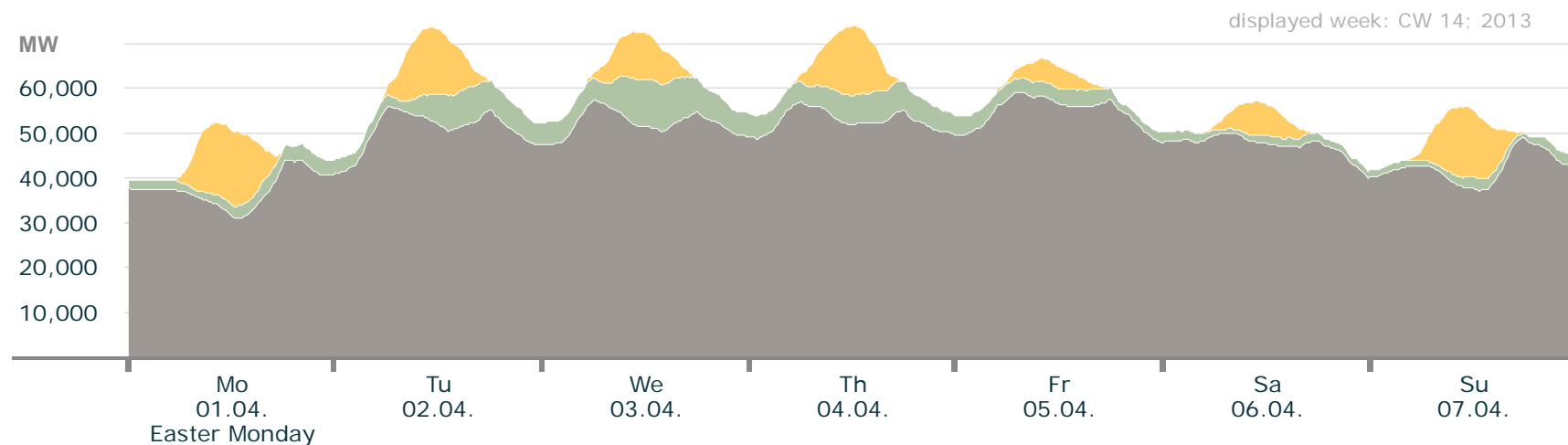


	max. power	date max. power	weekly energy
Solar	13.2 GW	27.03., 12:30 (+1:00)	0.51 TWh
Wind	18.0 GW	25.03., 14:45 (+1:00)	0.99 TWh
Conventional > 100 MW	58.6 GW	28.03., 19:00 (+1:00)	8.1 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 14

Actual production

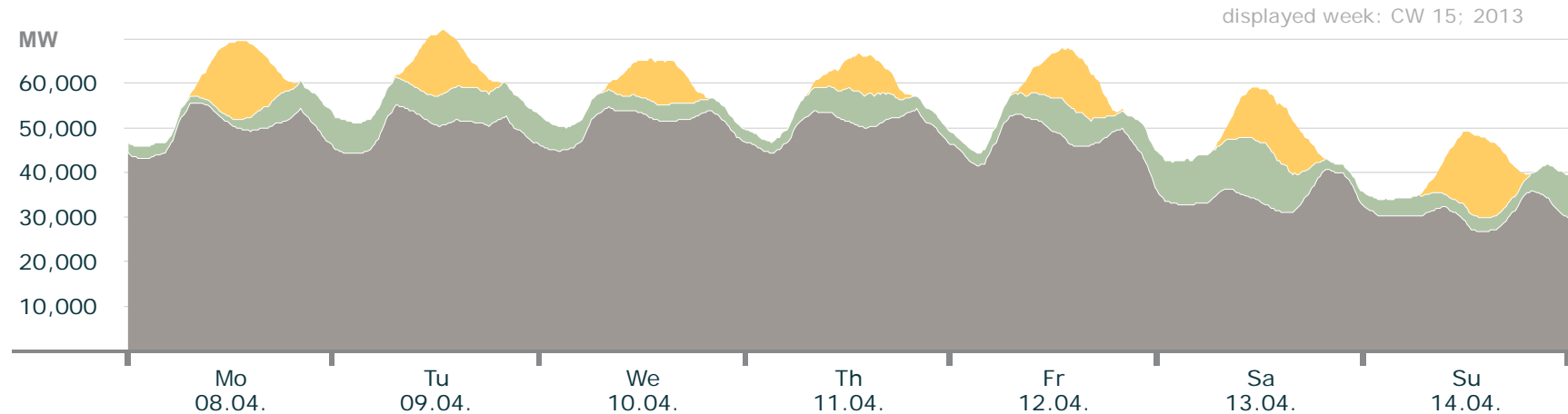


	max. power	date max. power	weekly energy
Solar	16.7 GW	01.04., 13:30 (+2:00)	0.62 TWh
Wind	10.6 GW	03.04., 14:45 (+2:00)	0.65 TWh
Conventional > 100 MW	59.2 GW	05.04., 09:00 (+2:00)	8.1 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 15

Actual production

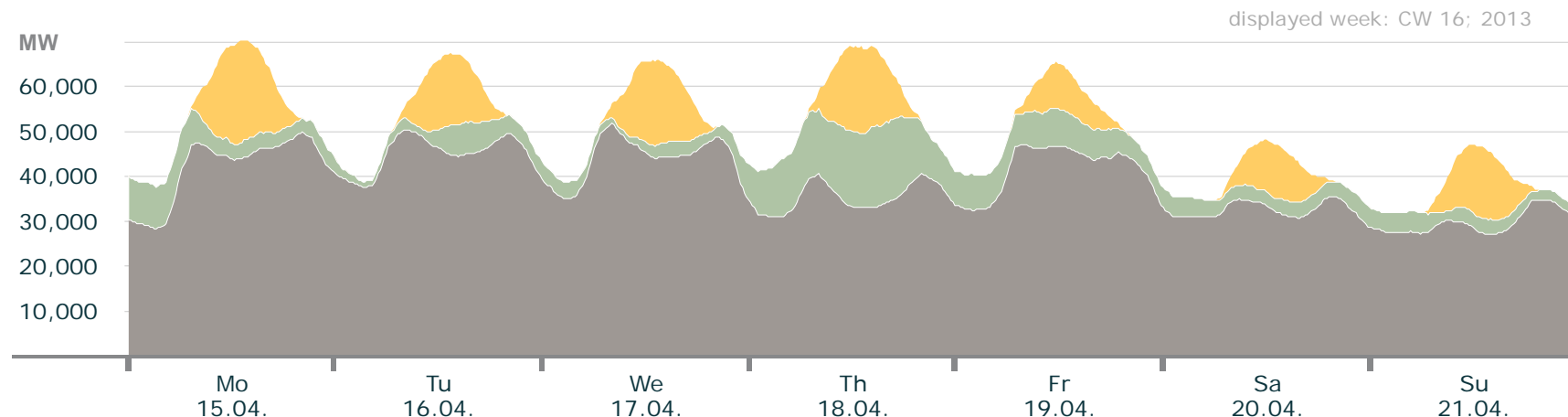


	max. power	date max. power	weekly energy
Solar	18.1 GW	14.04., 13:45 (+2:00)	0.68 TWh
Wind	13.7 GW	13.04., 12:45 (+2:00)	0.89 TWh
Conventional > 100 MW	55.7 GW	08.04., 08:00 (+2:00)	7.6 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 16

Actual production

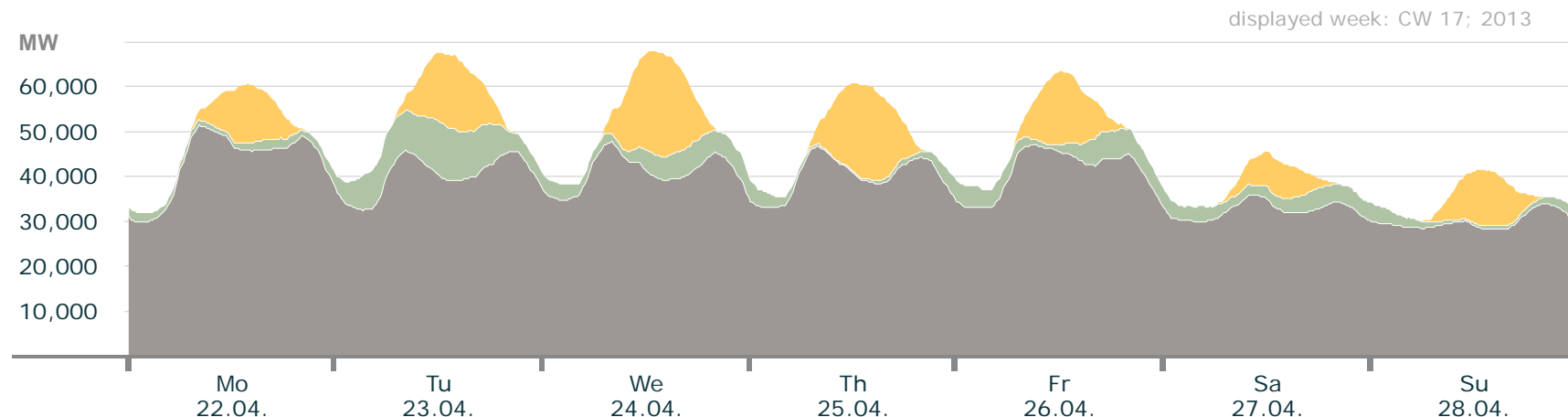


	max. power	date max. power	weekly energy
Solar	22.7 GW	15.04., 12:45 (+2:00)	0.86 TWh
Wind	18.3 GW	18.04., 14:45 (+2:00)	0.95 TWh
Conventional > 100 MW	52.2 GW	17.04., 08:00 (+2:00)	6.5 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 17

Actual production

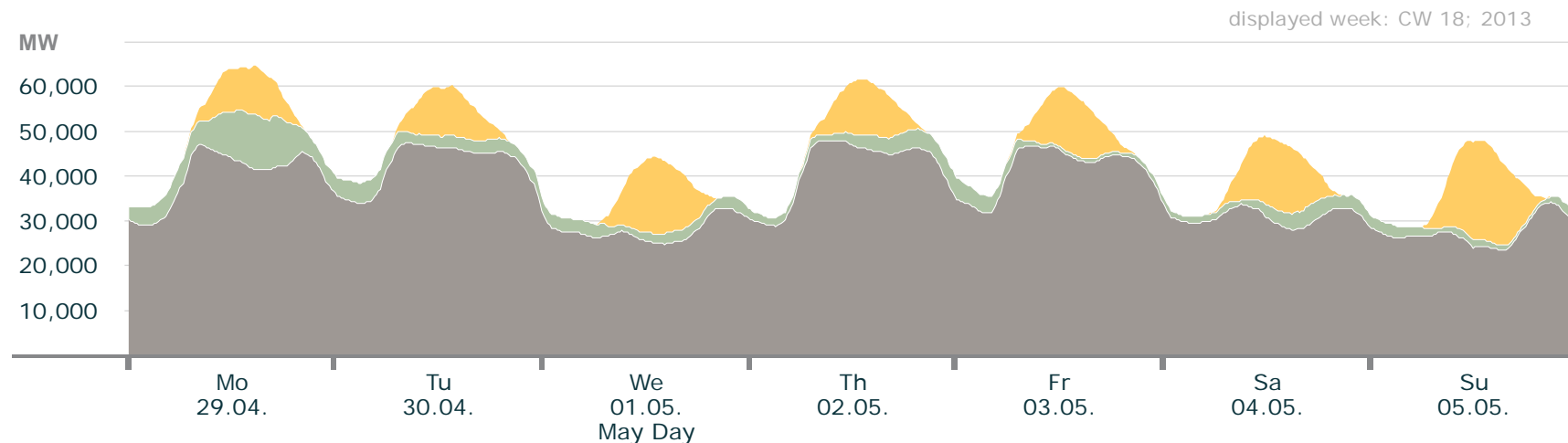


	max. power	date max. power	weekly energy
Solar	23.1 GW	24.04., 13:45 (+2:00)	0.84 TWh
Wind	12.2 GW	23.04., 12:15 (+2:00)	0.59 TWh
Conventional > 100 MW	51.5 GW	22.04., 08:00 (+2:00)	6.5 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 18

Actual production

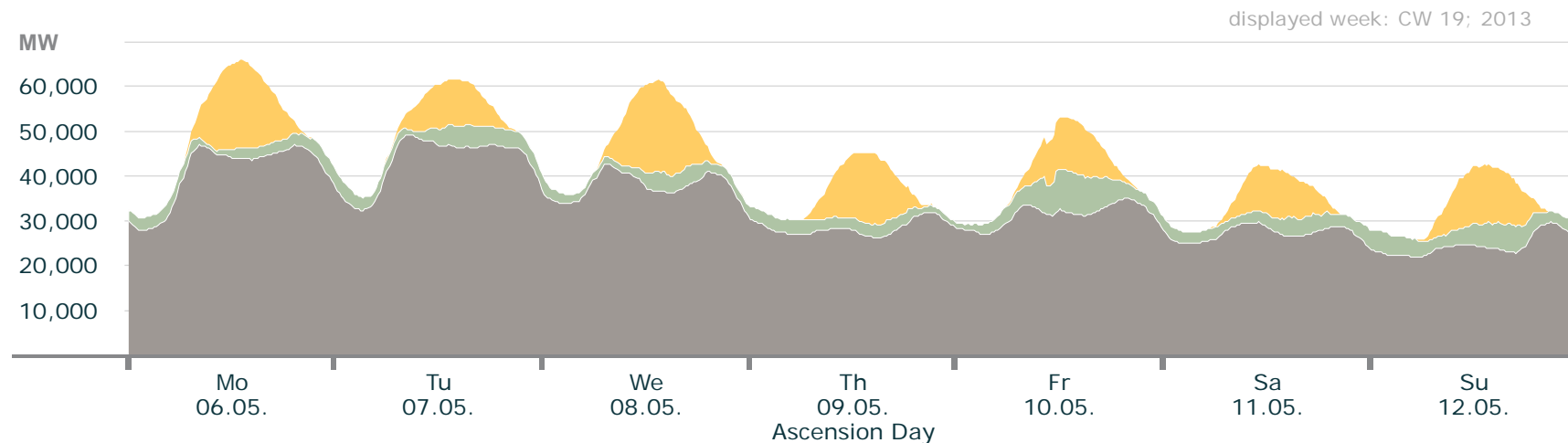


	max. power	date max. power	weekly energy
Solar	22.1 GW	05.05., 12:30 (+2:00)	0.83 TWh
Wind	12.3 GW	29.04., 14:15 (+2:00)	0.52 TWh
Conventional > 100 MW	48.1 GW	02.05., 09:00 (+2:00)	6.1 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 19

Actual production

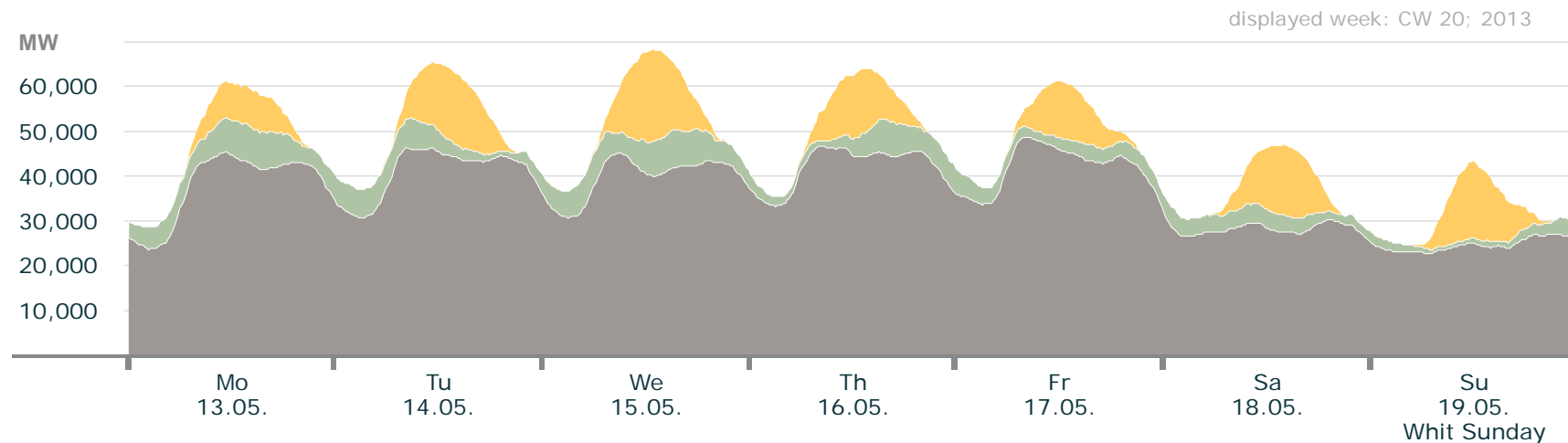


	max. power	date max. power	weekly energy
Solar	20.3 GW	08.05., 13:15 (+2:00)	0.84 TWh
Wind	9.4 GW	10.05., 13:00 (+2:00)	0.56 TWh
Conventional > 100 MW	49.4 GW	07.05., 08:00 (+2:00)	5.6 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 20

Actual production

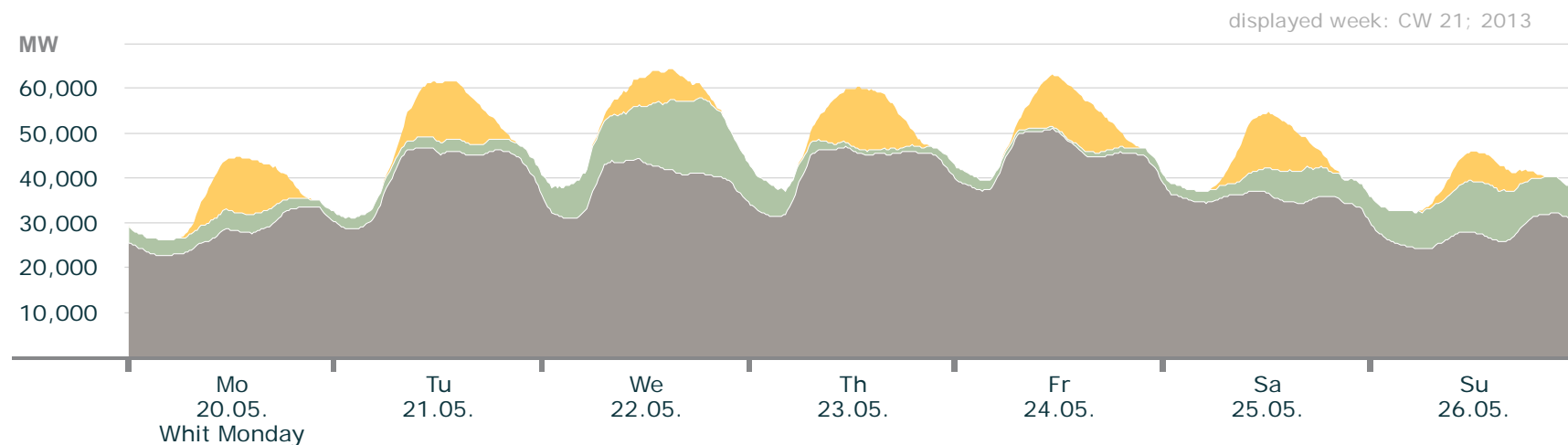


	max. power	date max. power	weekly energy
Solar	20.4 GW	15.05., 12:30 (+2:00)	0.86 TWh
Wind	8.7 GW	13.05., 13:15 (+2:00)	0.70 TWh
Conventional > 100 MW	49.0 GW	17.05., 08:00 (+2:00)	6.1 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 21

Actual production

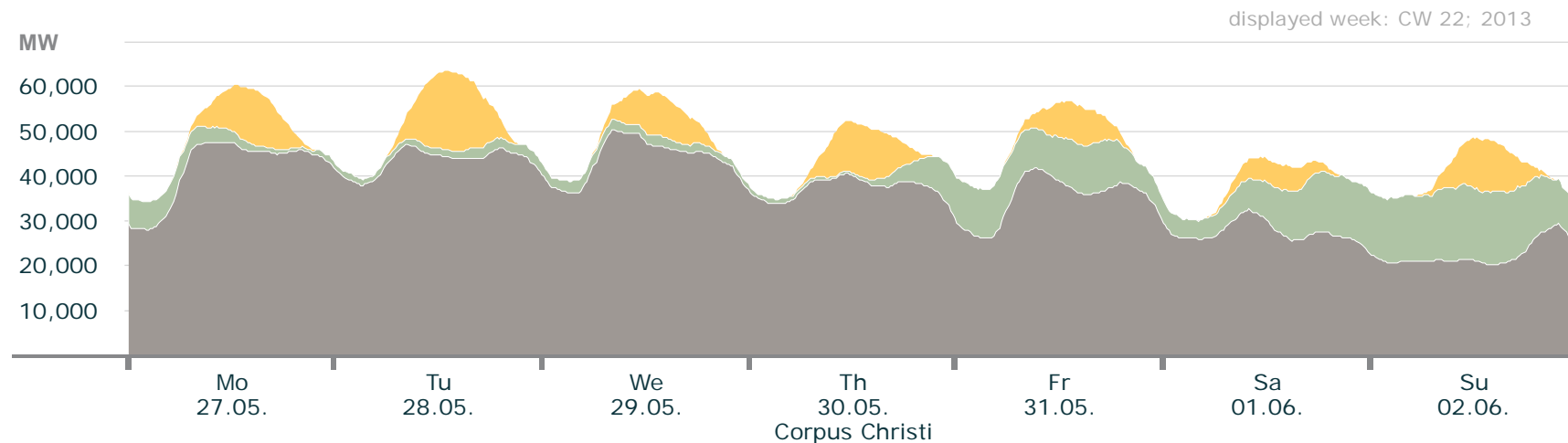


	max. power	date max. power	weekly energy
Solar	13.8 GW	23.05., 13:15 (+2:00)	0.68 TWh
Wind	16.8 GW	22.05., 18:00 (+2:00)	0.85 TWh
Conventional > 100 MW	51.0 GW	24.05., 11:00 (+2:00)	6.2 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 22

Actual production

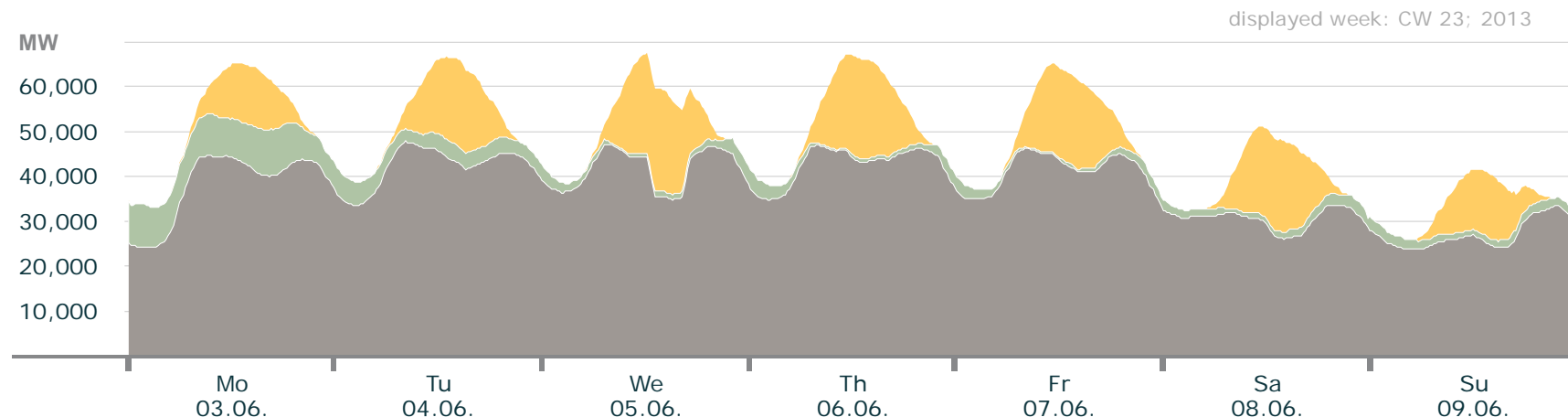


	max. power	date max. power	weekly energy
Solar	17.7 GW	28.05., 13:00 (+2:00)	0.65 TWh
Wind	16.8 GW	02.06., 10:45 (+2:00)	1.0 TWh
Conventional > 100 MW	50.5 GW	29.05., 08:00 (+2:00)	6.1 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 23

Actual production

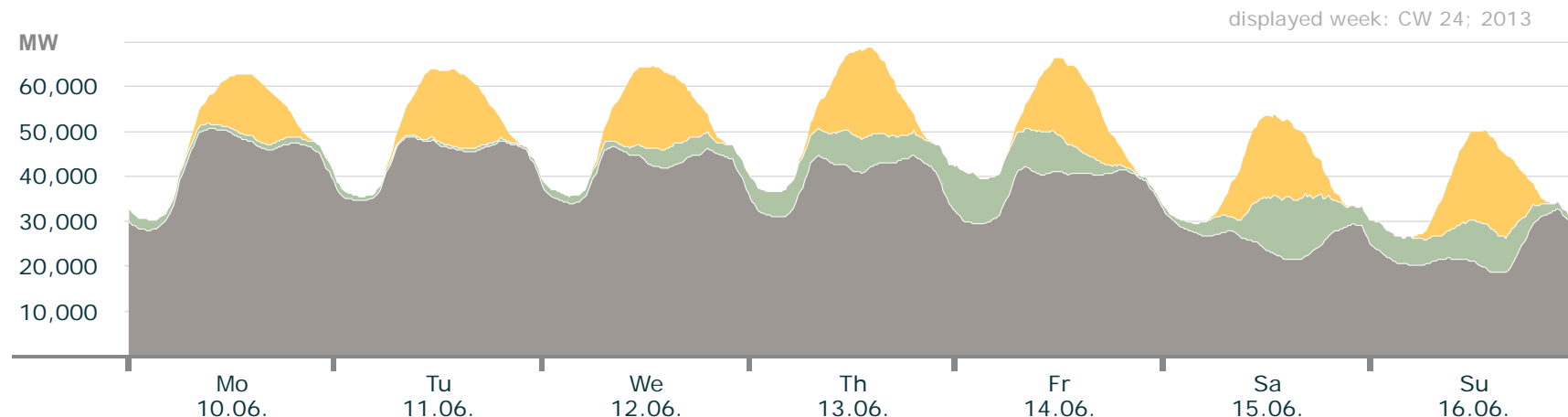


	max. power	date max. power	weekly energy
Solar	22.9 GW	05.06., 13:15 (+2:00)	1.2 TWh
Wind	10.4 GW	03.06., 16:15 (+2:00)	0.5 TWh
Conventional > 100 MW	48.9 GW	04.06., 08:00 (+2:00)	6.3 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 24

Actual production

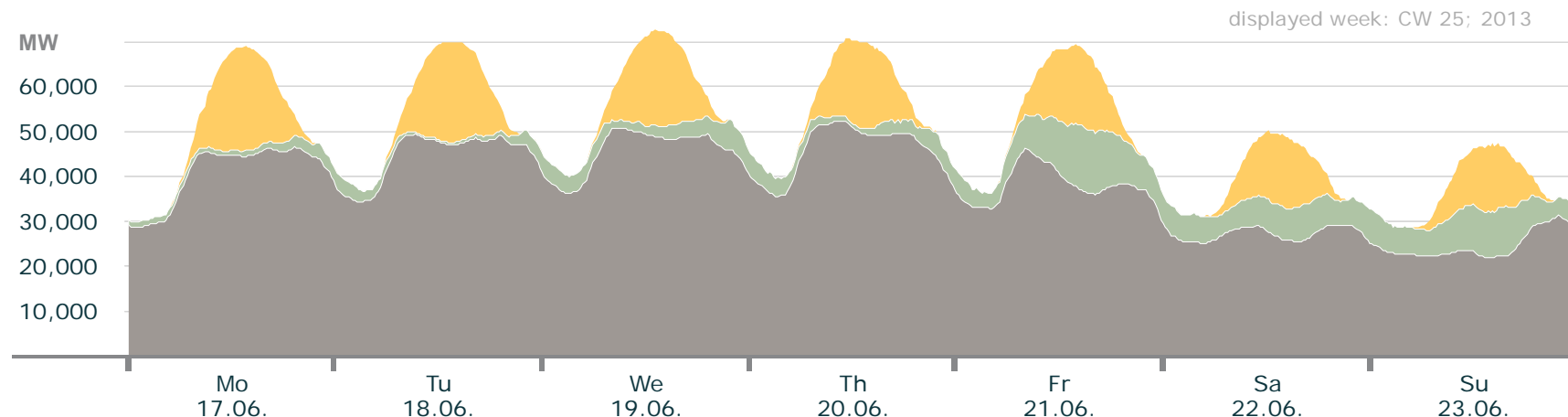


	max. power	date max. power	weekly energy
Solar	20.6 GW	16.06., 13:15 (+2:00)	1.1 TWh
Wind	14.2 GW	15.06., 14:30 (+2:00)	0.7 TWh
Conventional > 100 MW	50.7 GW	10.06., 09:00 (+2:00)	6.1 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 25

Actual production

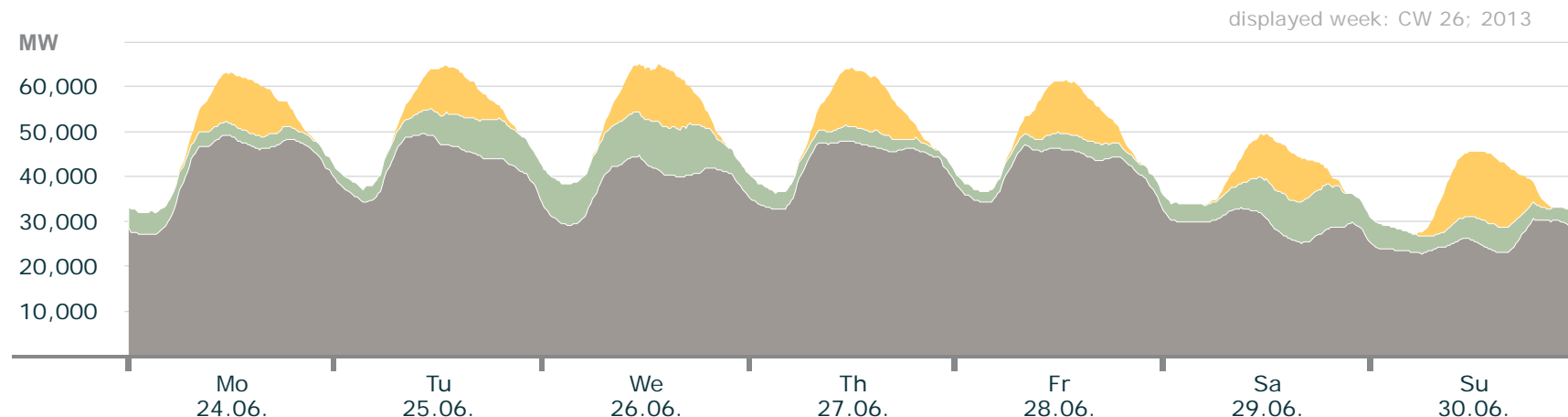


	max. power	date max. power	weekly energy
Solar	23.2 GW	17.06., 13:15 (+2:00)	1.1 TWh
Wind	14.4 GW	12.06., 14:15 (+2:00)	0.8 TWh
Conventional > 100 MW	52.5 GW	20.06., 11:00 (+2:00)	6.4 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 26

Actual production

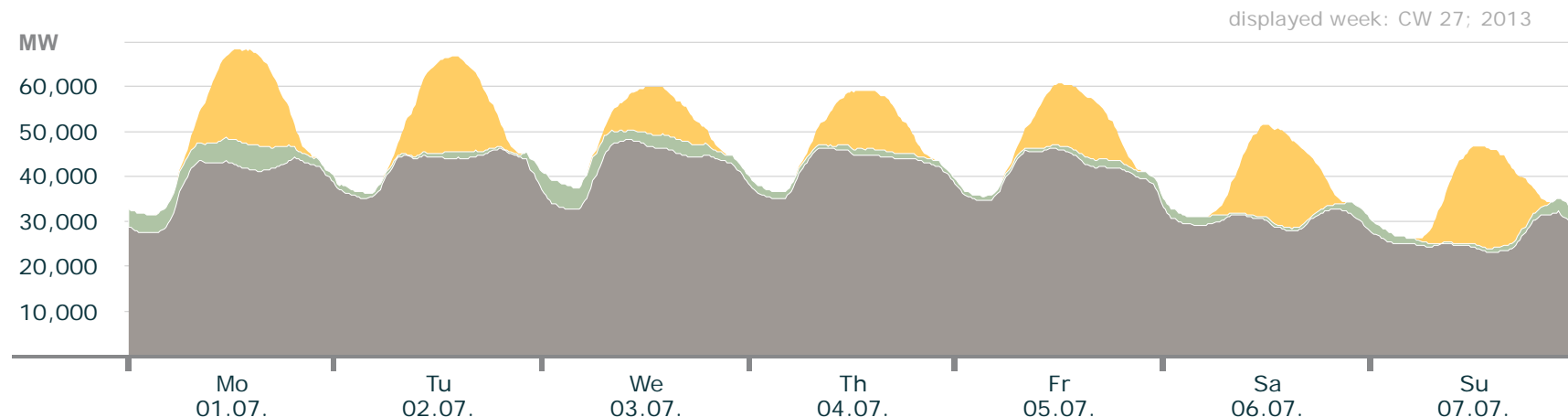


	max. power	date max. power	weekly energy
Solar	15.6 GW	30.06., 13:45 (+2:00)	0.8 TWh
Wind	11.4 GW	26.06., 17:00 (+2:00)	0.8 TWh
Conventional > 100 MW	49.6 GW	25.06., 10:00 (+2:00)	6.3 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 27

Actual production

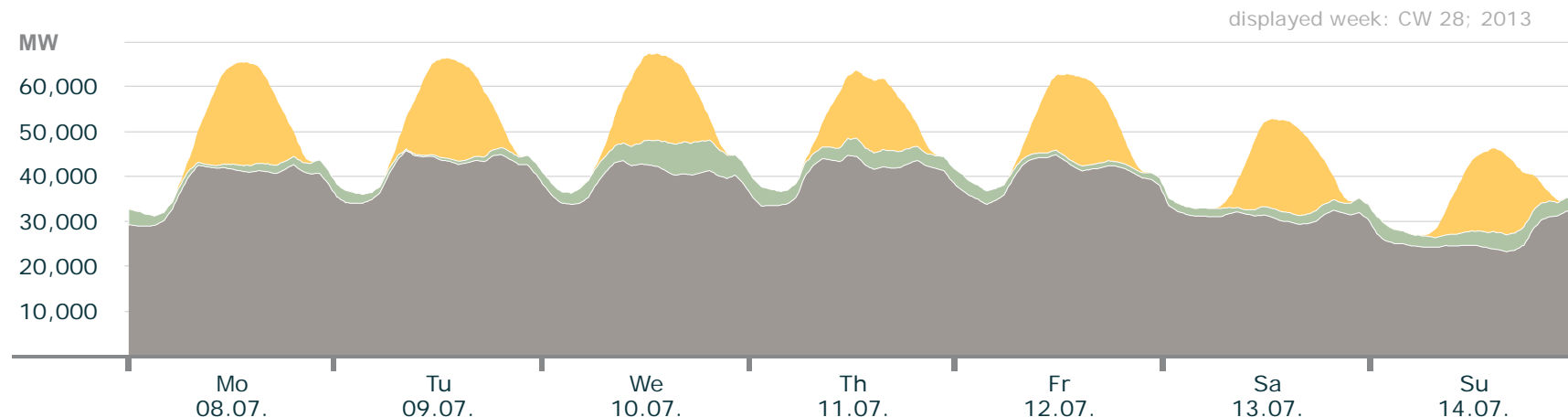


	max. power	date max. power	weekly energy
Solar	22.4 GW	07.07., 13:30 (+2:00)	1.1 TWh
Wind	5.8 GW	01.07., 14:30 (+2:00)	0.3 TWh
Conventional > 100 MW	48.4 GW	03.07., 10:00 (+2:00)	6.3 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 28

Actual production

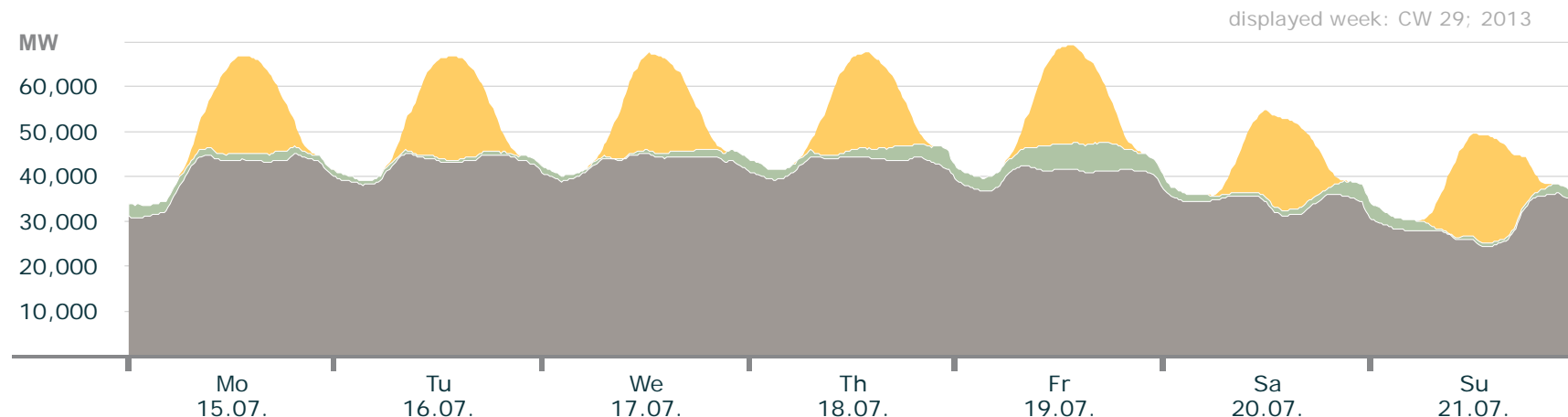


	max. power	date max. power	weekly energy
Solar	22.9 GW	08.07., 13:00 (+2:00)	1.2 TWh
Wind	7.3 GW	10.07., 17:15 (+2:00)	0.4 TWh
Conventional > 100 MW	45.9 GW	09.07., 08:00 (+2:00)	6.2 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 29

Actual production

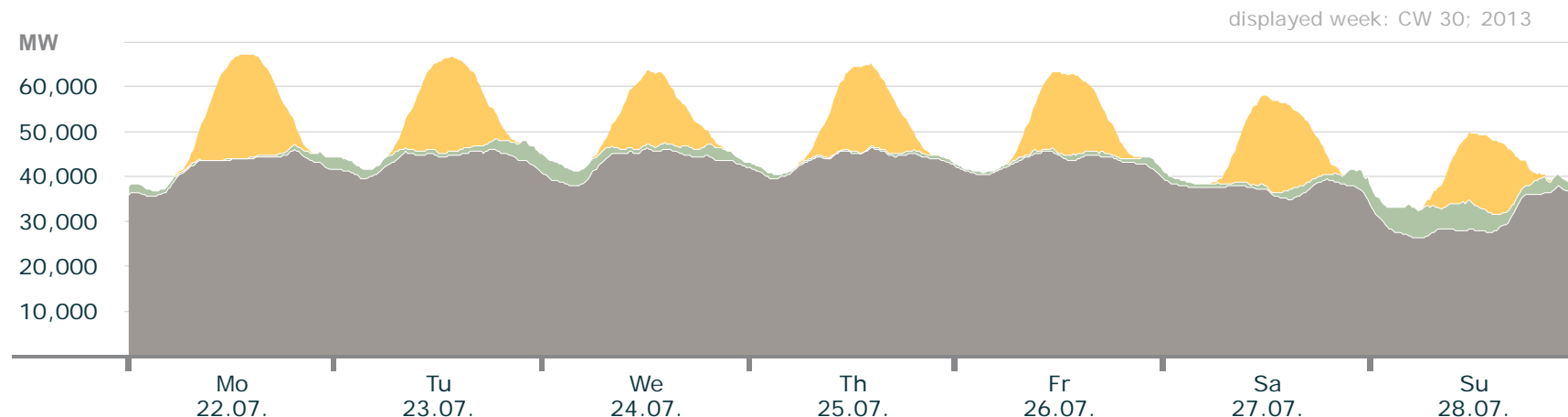


	max. power	date max. power	weekly energy
Solar	24.0 GW	21.07., 13:30 (+2:00)	1.3 TWh
Wind	6.7 GW	19.07., 18:00 (+2:00)	0.3 TWh
Conventional > 100 MW	45.4 GW	16.07., 08:00 (+2:00)	6.6 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 30

Actual production

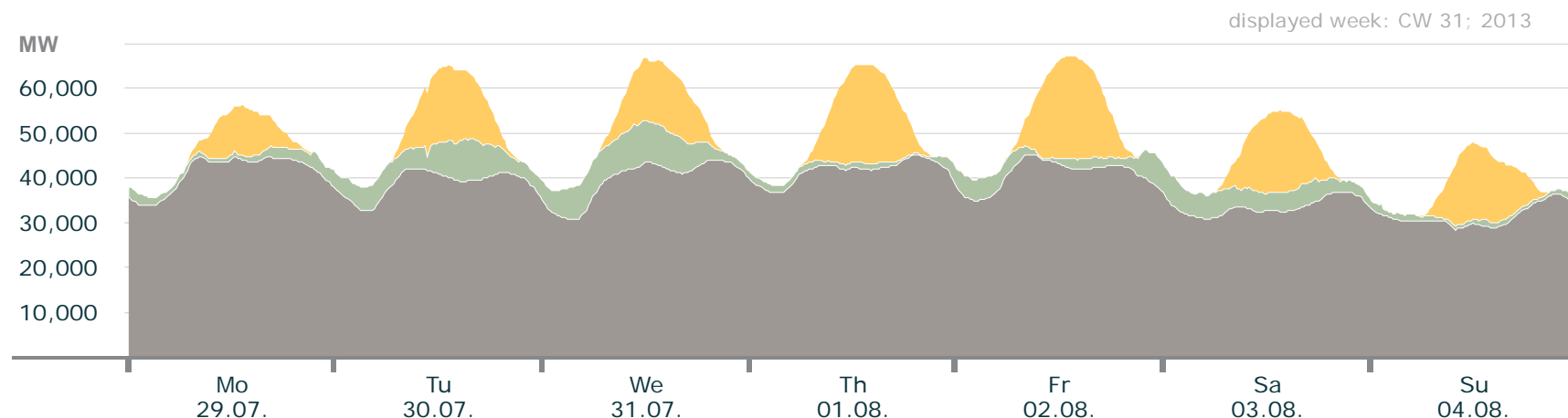


	max. power	date max. power	weekly energy
Solar	23.2 GW	22.07., 13:15 (+2:00)	1.1 TWh
Wind	7.0 GW	28.07., 04:30 (+2:00)	0.3 TWh
Conventional > 100 MW	46.3 GW	25.07., 14:00 (+2:00)	6.8 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 31

Actual production

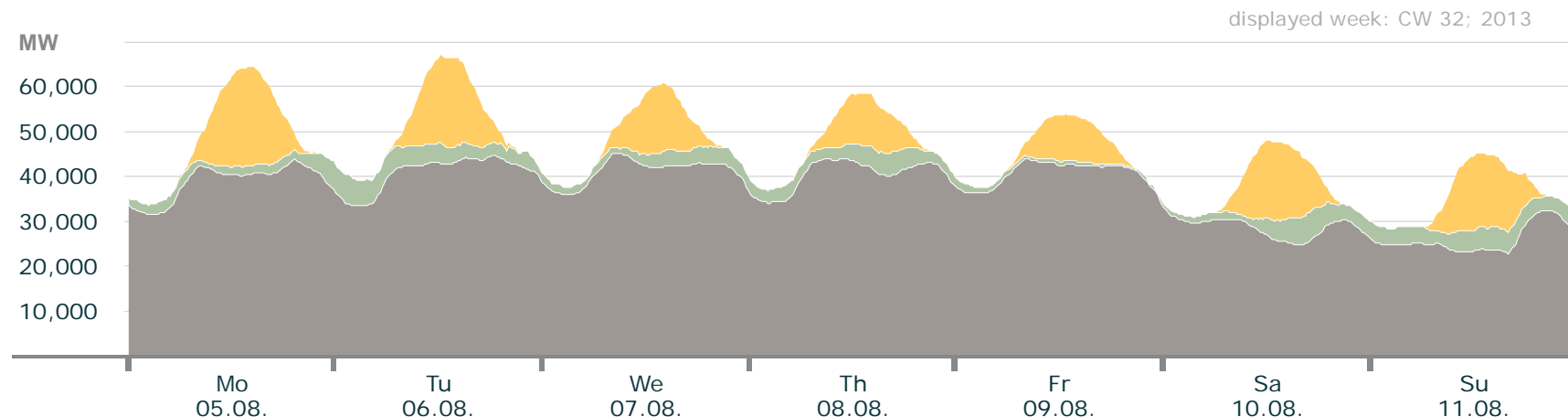


	max. power	date max. power	weekly energy
Solar	22.9 GW	02.08., 13:15 (+2:00)	1.0 TWh
Wind	9.7 GW	31.07., 10:30 (+2:00)	0.6 TWh
Conventional > 100 MW	45.4 GW	02.08., 09:00 (+2:00)	6.4 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 32

Actual production

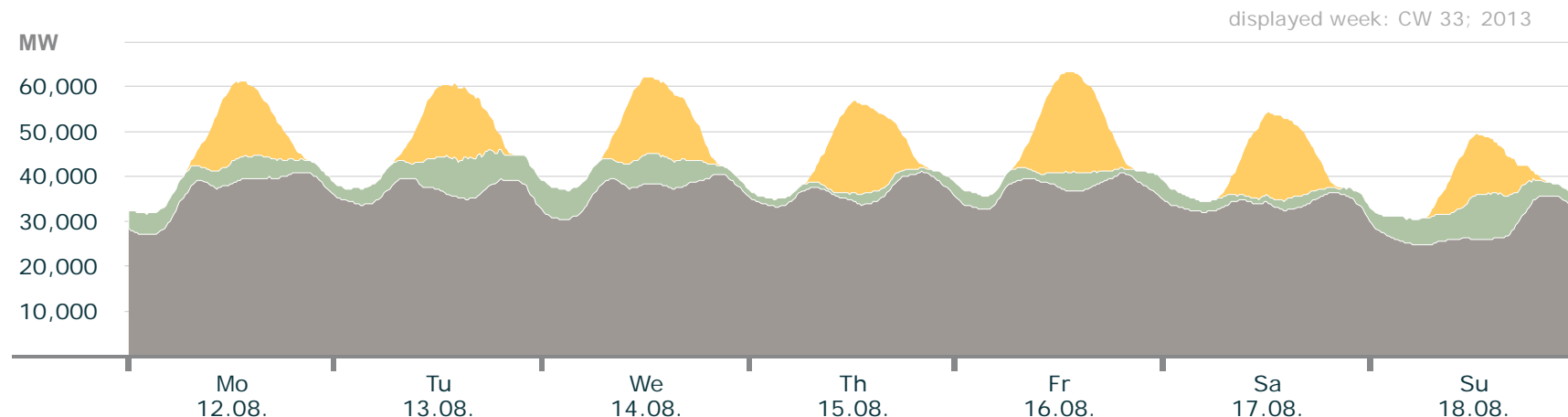


	max. power	date max. power	weekly energy
Solar	22.1 GW	05.08., 14:00 (+2:00)	0.9 TWh
Wind	6.6 GW	10.08., 17:00 (+2:00)	0.5 TWh
Conventional > 100 MW	45.1 GW	07.08., 09:00 (+2:00)	6.2 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 33

Actual production

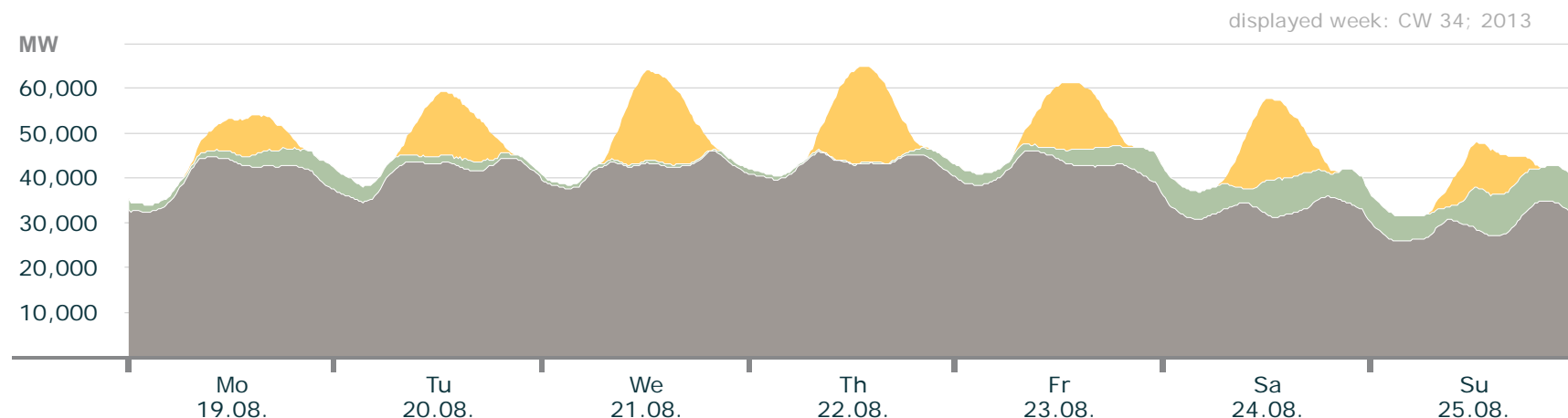


	max. power	date max. power	weekly energy
Solar	22.2 GW	16.08., 13:30 (+2:00)	1.0 TWh
Wind	10.3 GW	18.08., 14:45 (+2:00)	0.66 TWh
Conventional > 100 MW	41.0 GW	15.08., 20:00 (+2:00)	5.9 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 34

Actual production

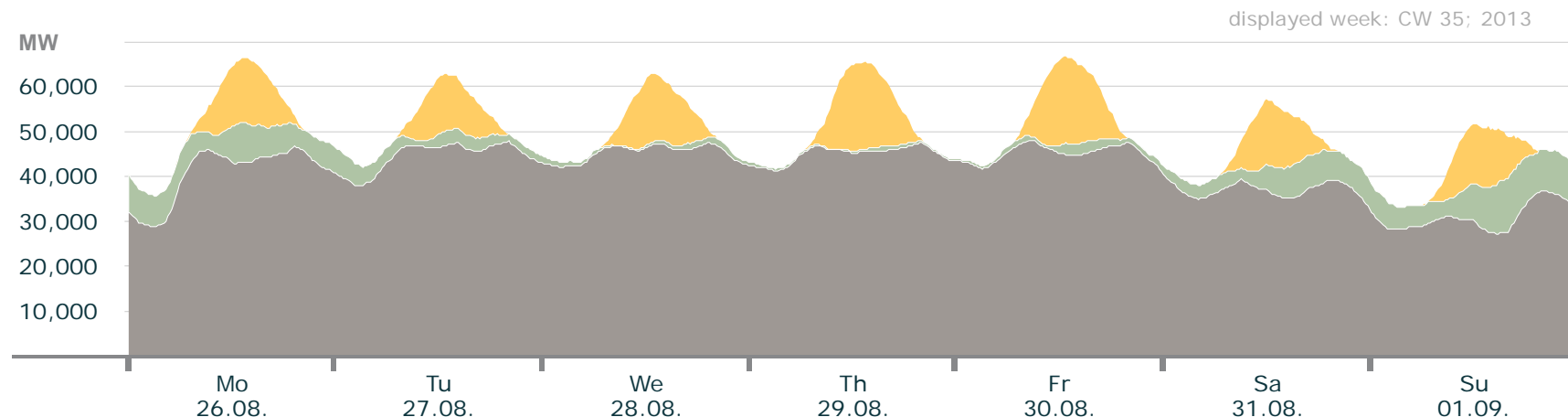


	max. power	date max. power	weekly energy
Solar	21.3 GW	22.08., 13:30 (+2:00)	0.84 TWh
Wind	9.7 GW	25.08., 13:00 (+2:00)	0.54 TWh
Conventional > 100 MW	46.1 GW	23.08., 09:00 (+2:00)	6,5 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 35

Actual production

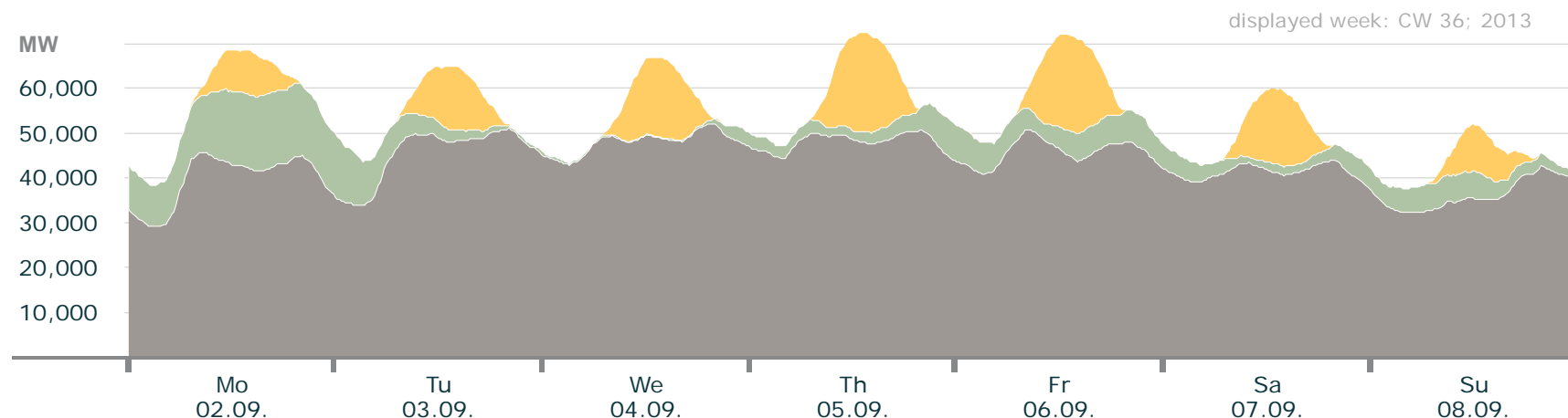


	max. power	date max. power	weekly energy
Solar	19.5 GW	30.08., 12:30 (+2:00)	0.82 TWh
Wind	11.8 GW	01.09., 16:45 (+2:00)	0.59 TWh
Conventional > 100 MW	47.9 GW	30.08., 09:00 (+2:00)	6.9 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 36

Actual production

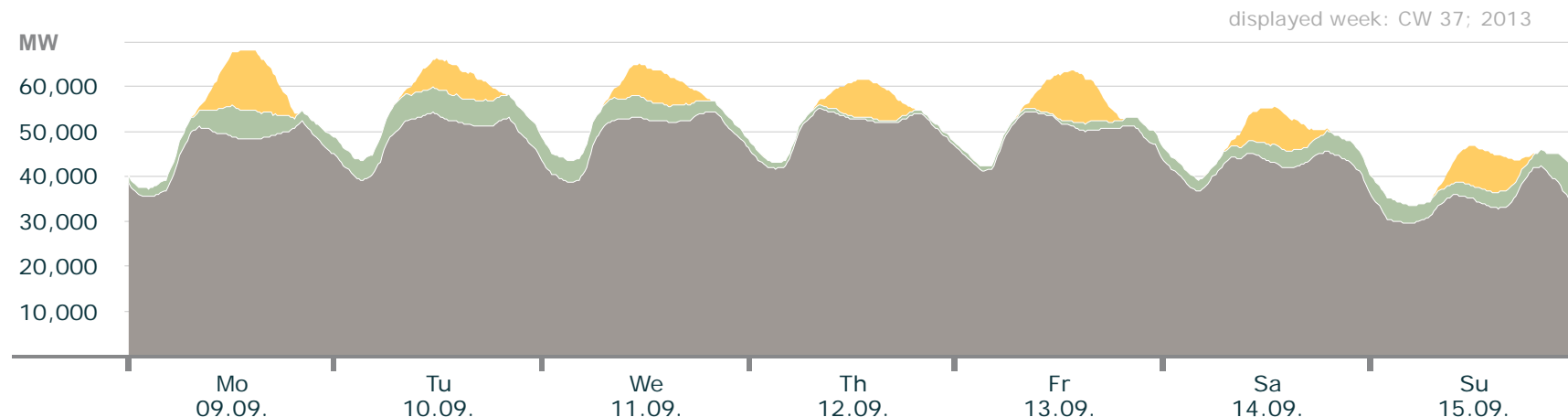


	max. power	date max. power	weekly energy
Solar	22.0 GW	05.09., 13:30 (+2:00)	0.83 TWh
Wind	17.0 GW	02.09., 15:15 (+2:00)	0.87 TWh
Conventional > 100 MW	52.1 GW	04.09., 20:00 (+2:00)	7.3 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 37

Actual production

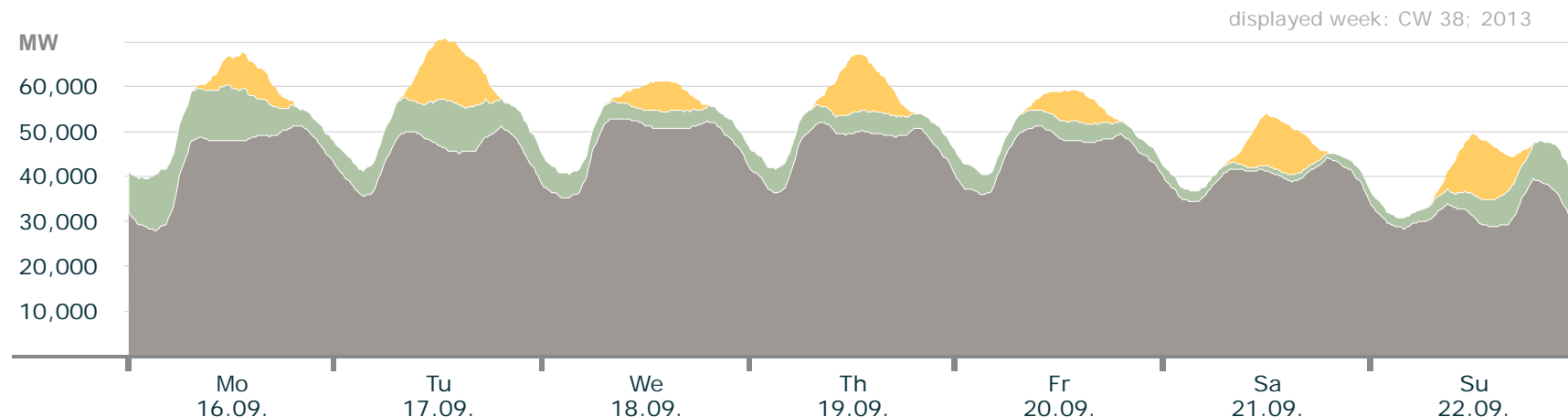


	max. power	date max. power	weekly energy
Solar	13.4 GW	09.09., 13:45 (+2:00)	0.47 TWh
Wind	9.1 GW	15.09., 23:45 (+2:00)	0.55 TWh
Conventional > 100 MW	55.1 GW	12.09., 08:00 (+2:00)	7.7 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 38

Actual production

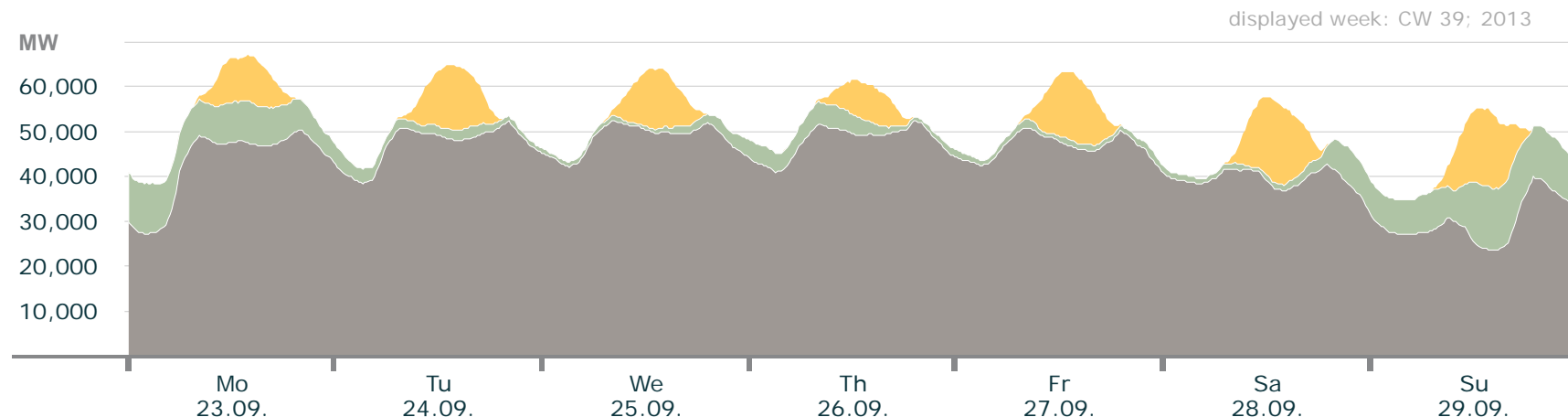


	max. power	date max. power	weekly energy
Solar	13.6 GW	17.09., 12:30 (+2:00)	0.50 TWh
Wind	12.8 GW	16.09., 03:30 (+2:00)	0.87 TWh
Conventional > 100 MW	52.9 GW	18.09., 08:00 (+2:00)	7.2 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 39

Actual production

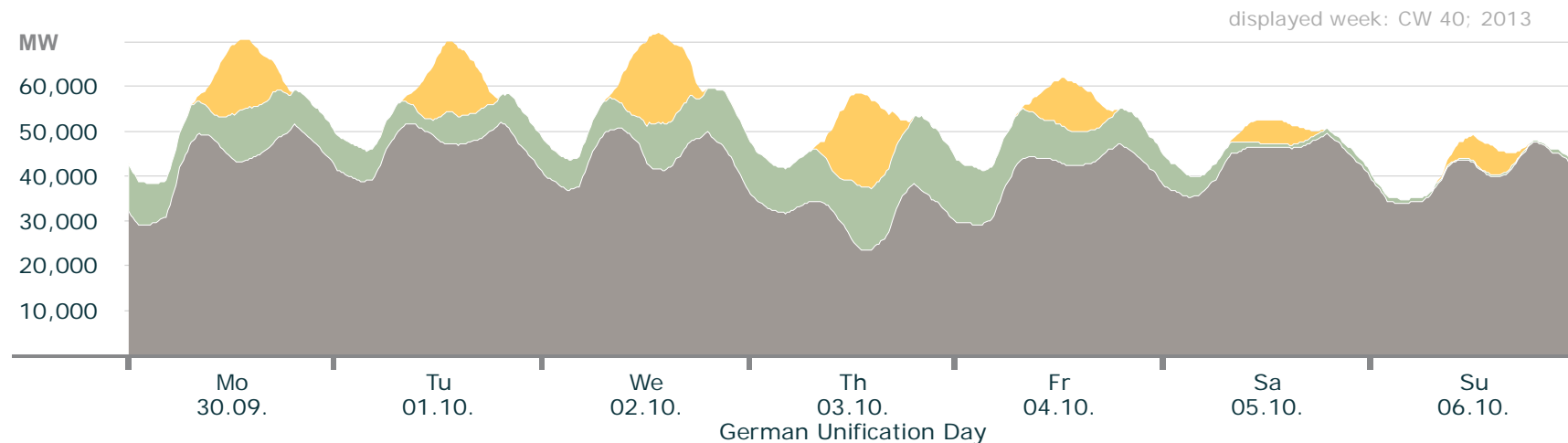


	max. power	date max. power	weekly energy
Solar	18.1 GW	28.09., 12:30 (+2:00)	0.64 TWh
Wind	14.7 GW	29.09., 16:15 (+2:00)	0.71 TWh
Conventional > 100 MW	52.4 GW	26.09., 19:00 (+2:00)	7.3 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 40

Actual production

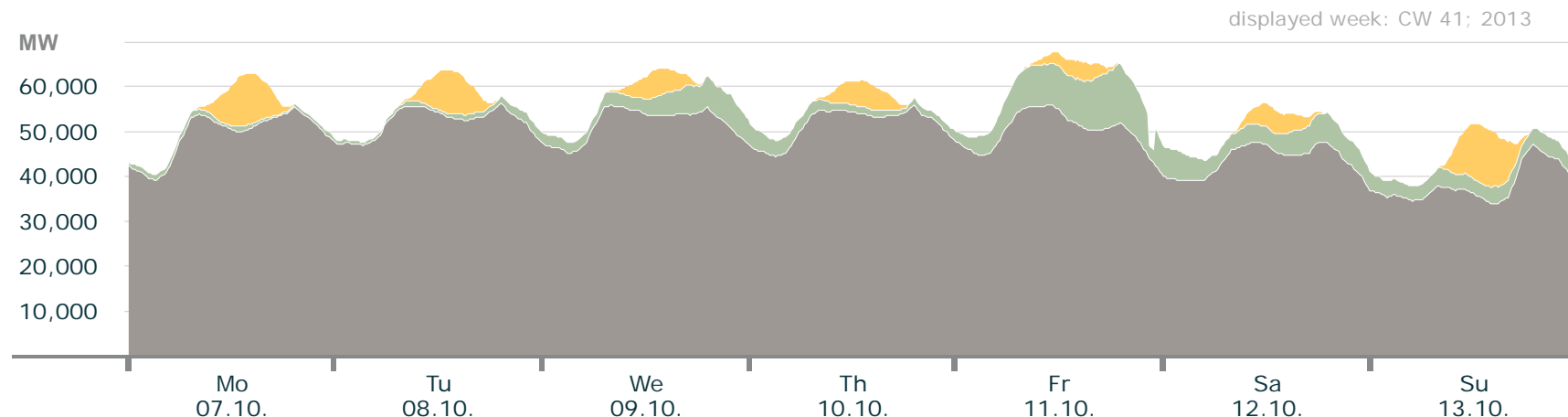


	max. power	date max. power	weekly energy
Solar	20.5 GW	03.10., 13:00 (+2:00)	0.62 TWh
Wind	16.6 GW	03.10., 20:45 (+2:00)	1.2 TWh
Conventional > 100 MW	52.1 GW	01.10., 19:00 (+2:00)	7.0 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 41

Actual production

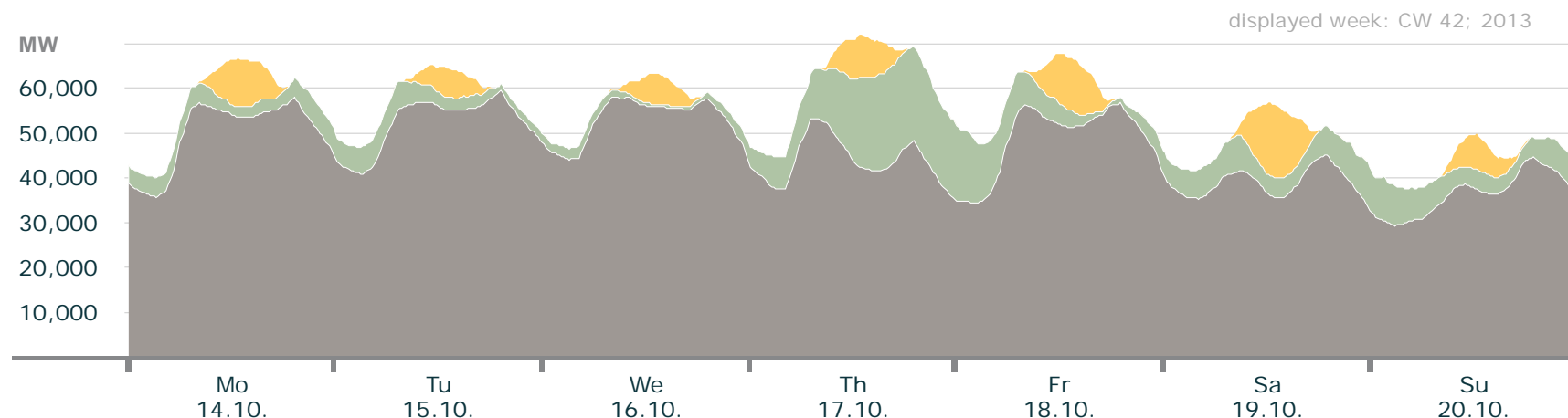


	max. power	date max. power	weekly energy
Solar	12.8 GW	13.10., 13:15 (+2:00)	0.33 TWh
Wind	13.5 GW	11.10., 18:45 (+2:00)	0.62 TWh
Conventional > 100 MW	56.4 GW	08.10., 19:00 (+2:00)	8.1 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 42

Actual production

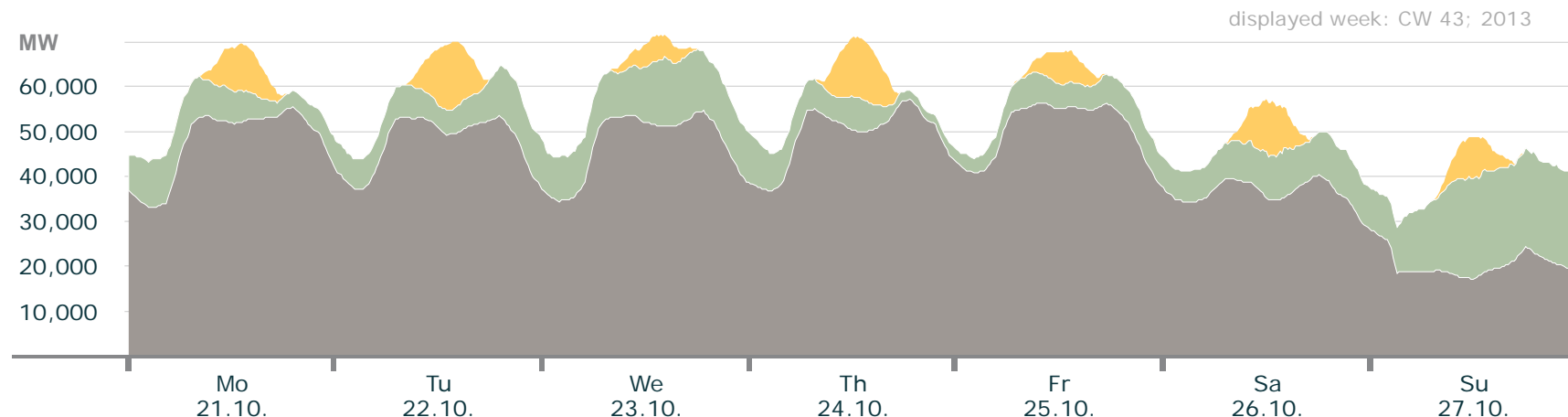


	max. power	date max. power	weekly energy
Solar	16.2 GW	19.10., 12:45 (+2:00)	0.40 TWh
Wind	22.2 GW	17.10., 16:15 (+2:00)	1.03 TWh
Conventional > 100 MW	59.4 GW	15.10., 19:00 (+2:00)	7.8 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 43

Actual production

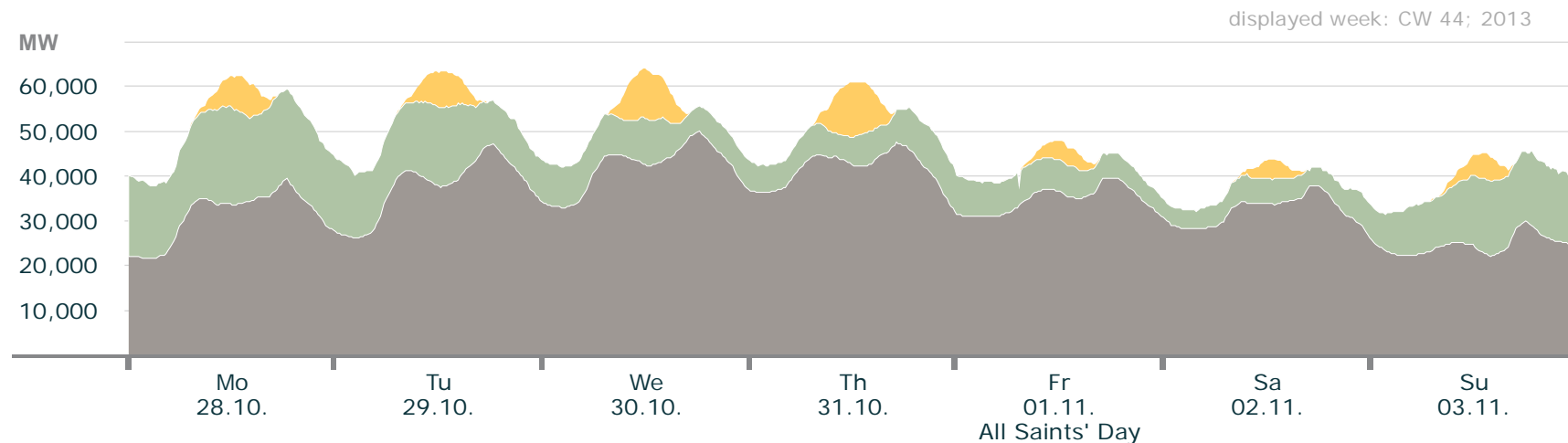


	max. power	date max. power	weekly energy
Solar	15.1 GW	22.10., 13:30 (+2:00)	0.40 TWh
Wind	22.8 GW	27.10., 13:15 (+1:00)	1.57 TWh
Conventional > 100 MW	57.0 GW	24.10., 19:00 (+2:00)	7.2 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 44

Actual production

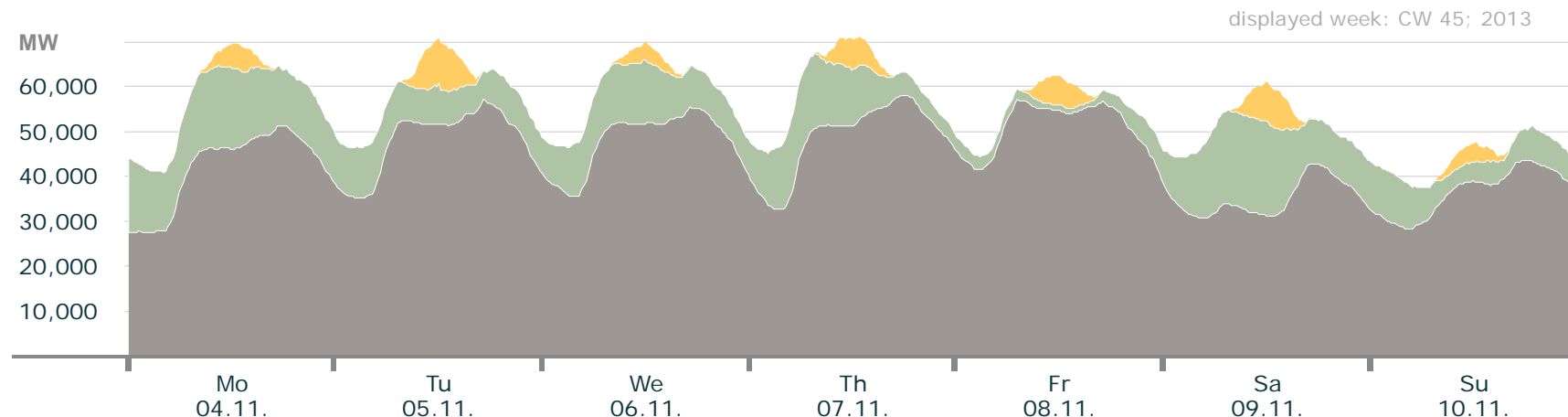


	max. power	date max. power	weekly energy
Solar	14.0 GW	31.10., 11:45 (+1:00)	0.33 TWh
Wind	24.9 GW	28.10., 11:15 (+1:00)	2.0 TWh
Conventional > 100 MW	57.1 GW	30.10., 18:00 (+1:00)	6.7 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 45

Actual production

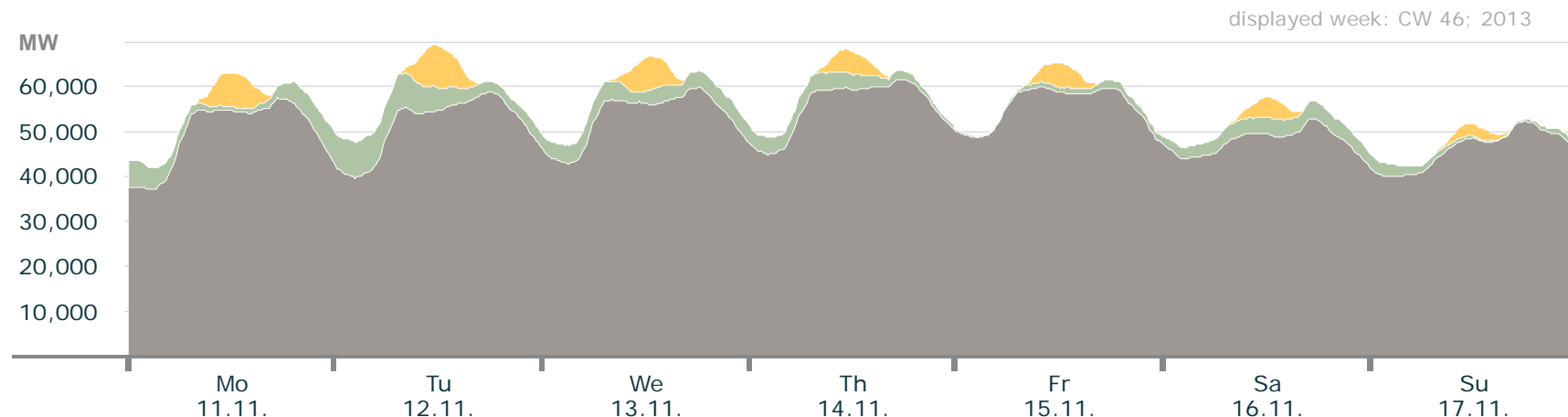


	max. power	date max. power	weekly energy
Solar	10.4 GW	05.11., 12:15 (+1:00)	0.23 TWh
Wind	21.3 GW	09.11., 10:30 (+1:00)	1.6 TWh
Conventional > 100 MW	58.1 GW	07.11., 18:00 (+1:00)	7.4 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 46

Actual production

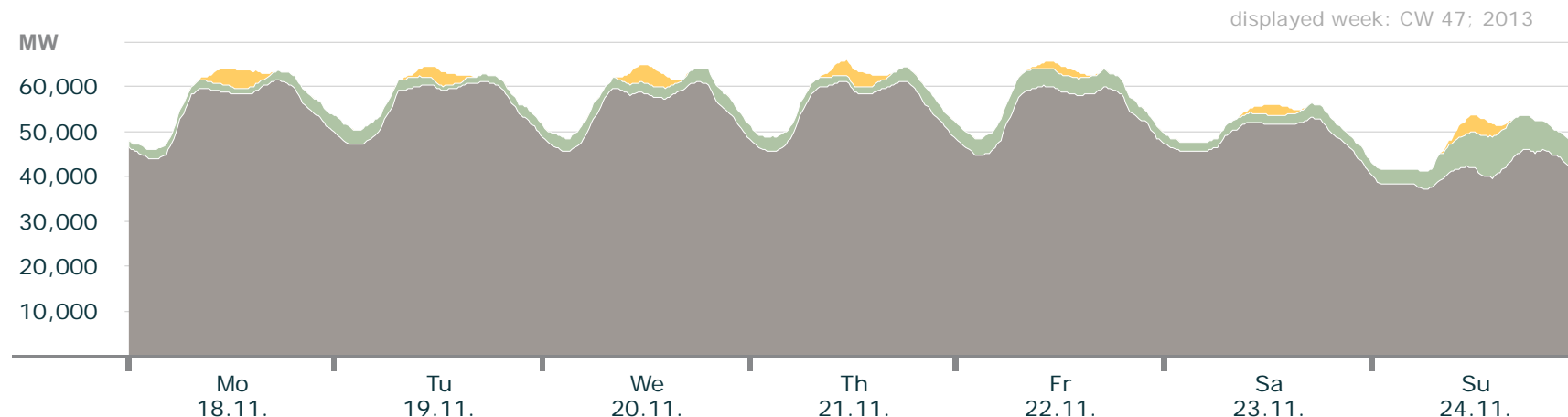


	max. power	date max. power	weekly energy
Solar	9.4 GW	12.11., 11:30 (+1:00)	0.21 TWh
Wind	8.2 GW	12.11., 03:15 (+1:00)	0.49 TWh
Conventional > 100 MW	61.6 GW	14.11., 17:00 (+1:00)	8.6 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 47

Actual production

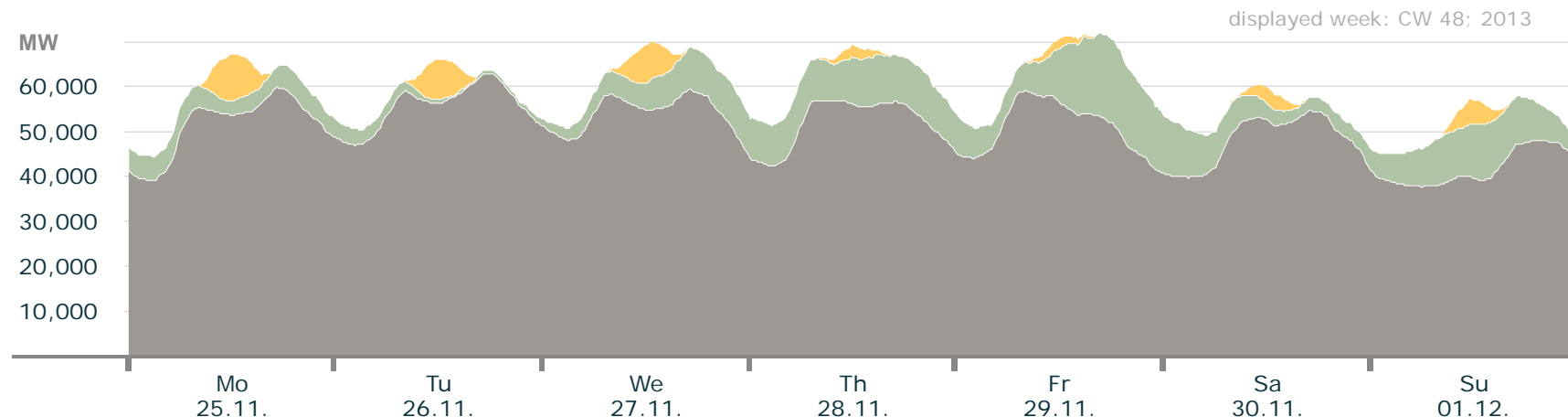


	max. power	date max. power	weekly energy
Solar	4.3 GW	18.11., 12:15 (+1:00)	0.11 TWh
Wind	9.2 GW	24.11., 13:00 (+1:00)	0.53 TWh
Conventional > 100 MW	61.7 GW	18.11., 17:00 (+1:00)	8.8 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 48

Actual production

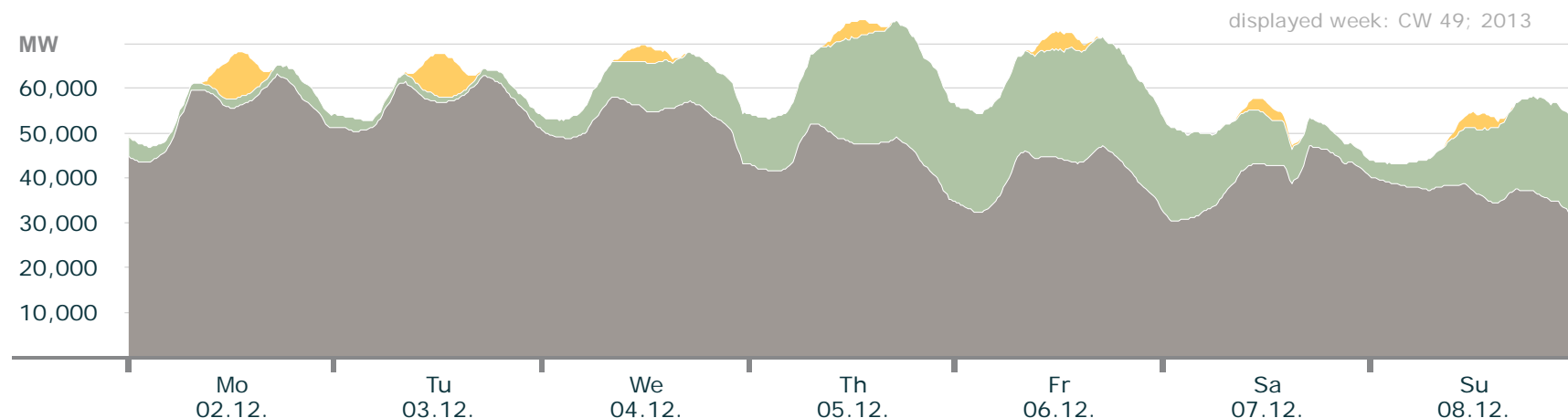


	max. power	date max. power	weekly energy
Solar	10.4 GW	25.11., 11:30 (+1:00)	0.19 TWh
Wind	18.9 GW	29.11., 17:30 (+1:00)	1.2 TWh
Conventional > 100 MW	62.7 GW	26.11., 18:00 (+1:00)	8.5 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 49

Actual production

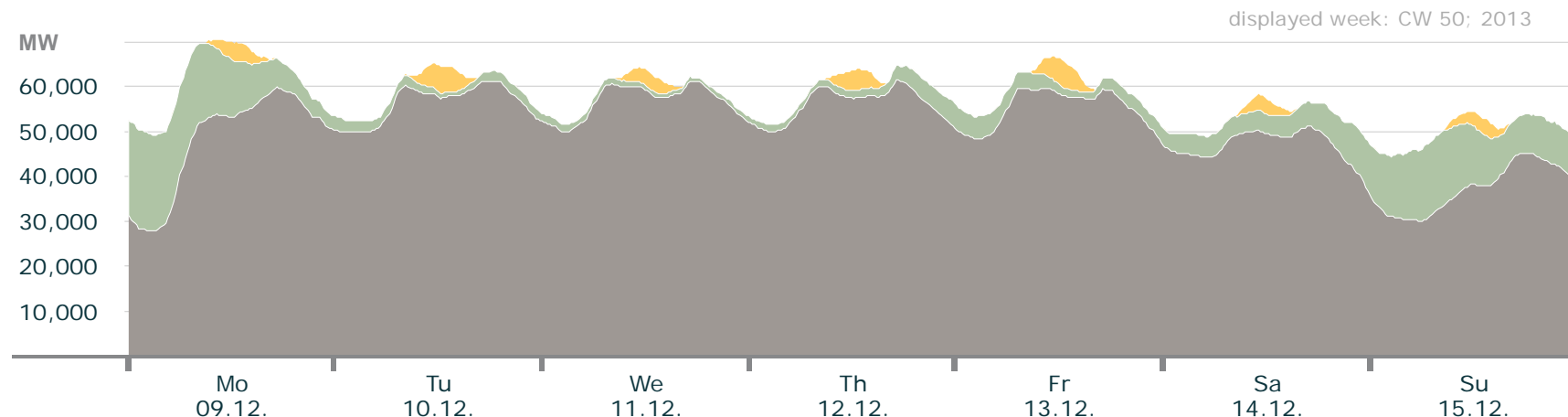


	max. power	date max. power	weekly energy
Solar	10.3 GW	02.12., 12:30 (+1:00)	0.17 TWh
Wind	26.3 GW	05.12., 18:15 (+1:00)	1.9 TWh
Conventional > 100 MW	63.1 GW	02.12., 17:00 (+1:00)	7.9 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 50

Actual production

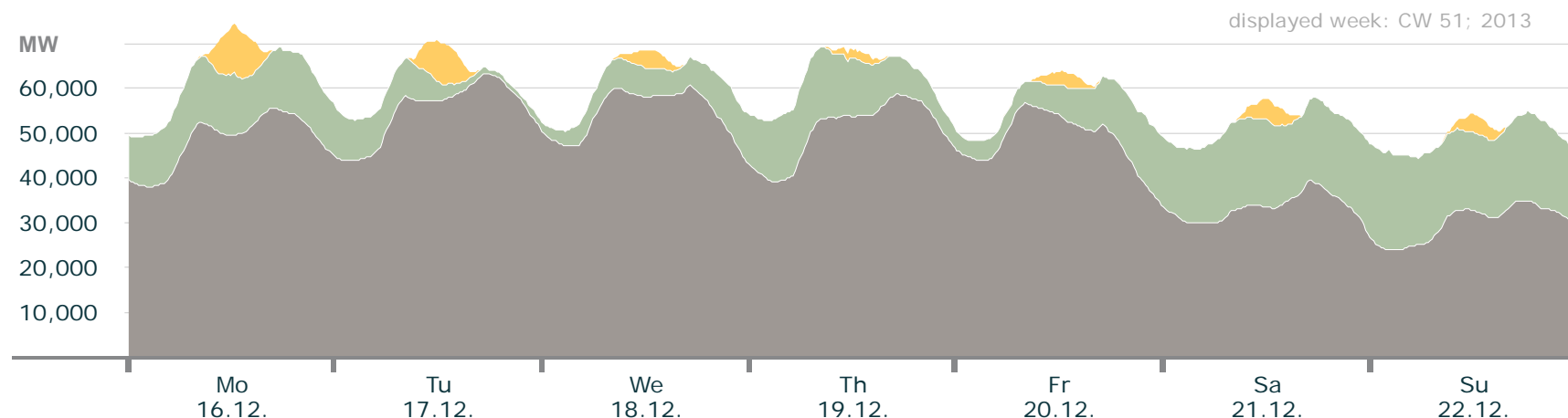


	max. power	date max. power	weekly energy
Solar	5.9 GW	13.12., 12:15 (+1:00)	0.14 TWh
Wind	21.9 GW	09.12., 01:15 (+1:00)	0.95 TWh
Conventional > 100 MW	61.7 GW	12.12., 17:00 (+1:00)	8.6 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 51

Actual production

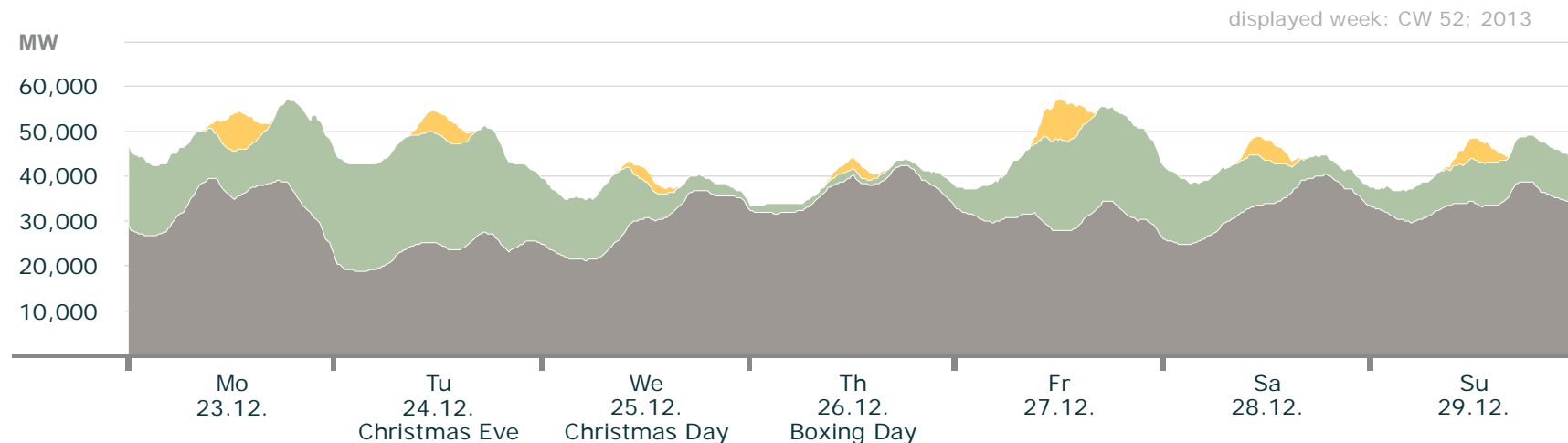


	max. power	date max. power	weekly energy
Solar	11.0 GW	16.12., 12:15 (+1:00)	0.17 TWh
Wind	22.4 GW	22.12., 02:15 (+1:00)	1.95 TWh
Conventional > 100 MW	63.4 GW	17.12., 17:00 (+1:00)	7.7 TWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 52

Actual production



	max. power	date max. power	weekly energy
Solar	9.1 GW	27.12., 12:00 (+1:00)	0.17 TWh
Wind	25.0 GW	24.12., 08:00 (+1:00)	1.98 TWh
Conventional > 100 MW	42.5 GW	26.12., 18:00 (+1:00)	5.3 TWh

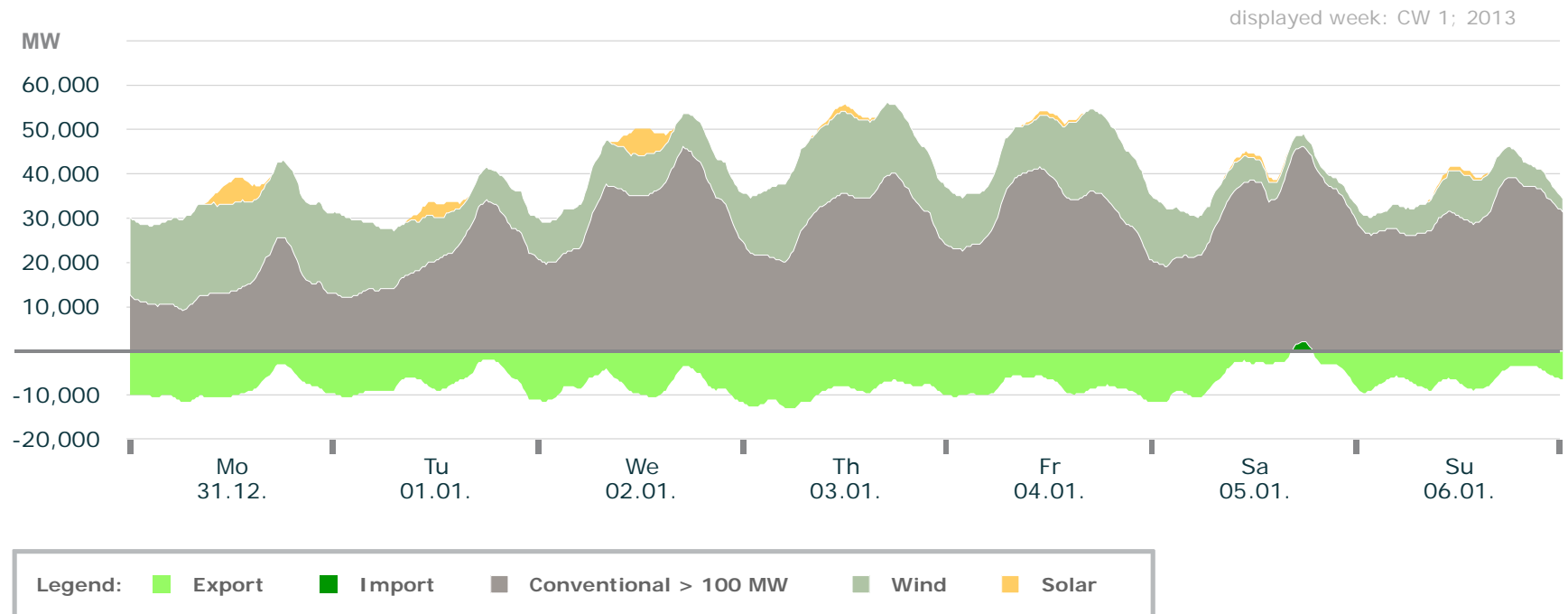
Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

AGENDA

- Annual energies
- Monthly energies
- Weekly energies
- Daily energies
- Annual power curves
- Monthly power curves
- **Weekly power curves**
 - Weekly power curves for conventional, wind and solar
 - **Weekly power curves with import and export**
 - Detailed weekly power curves
- Exemplary daily power curves

Electricity Production in Germany: Calendar Week 1

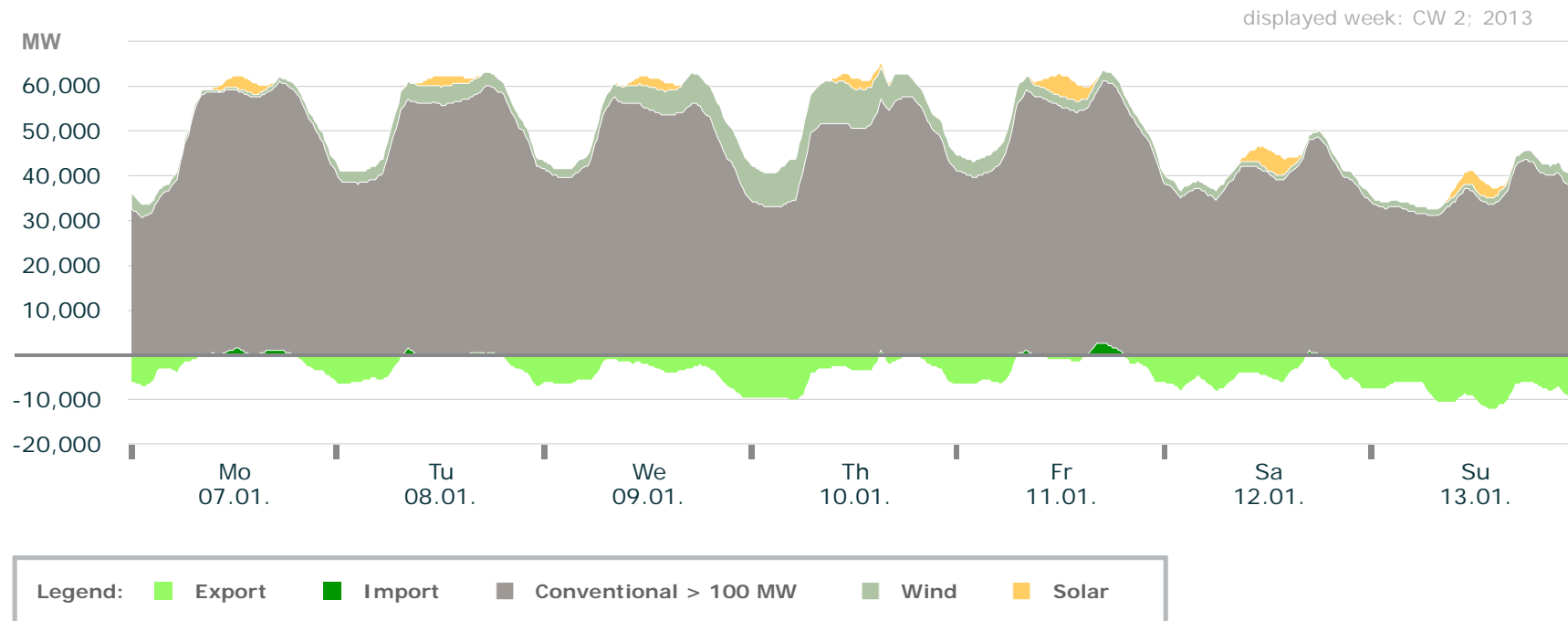
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 2

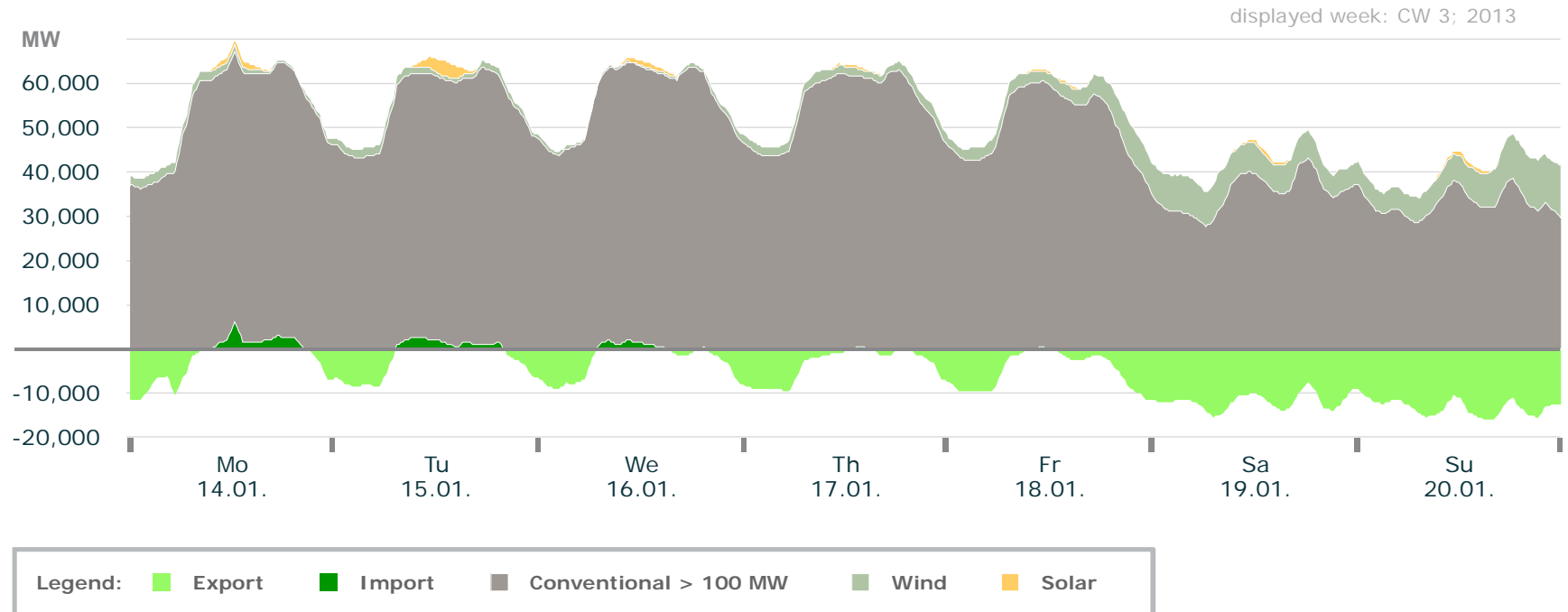
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 3

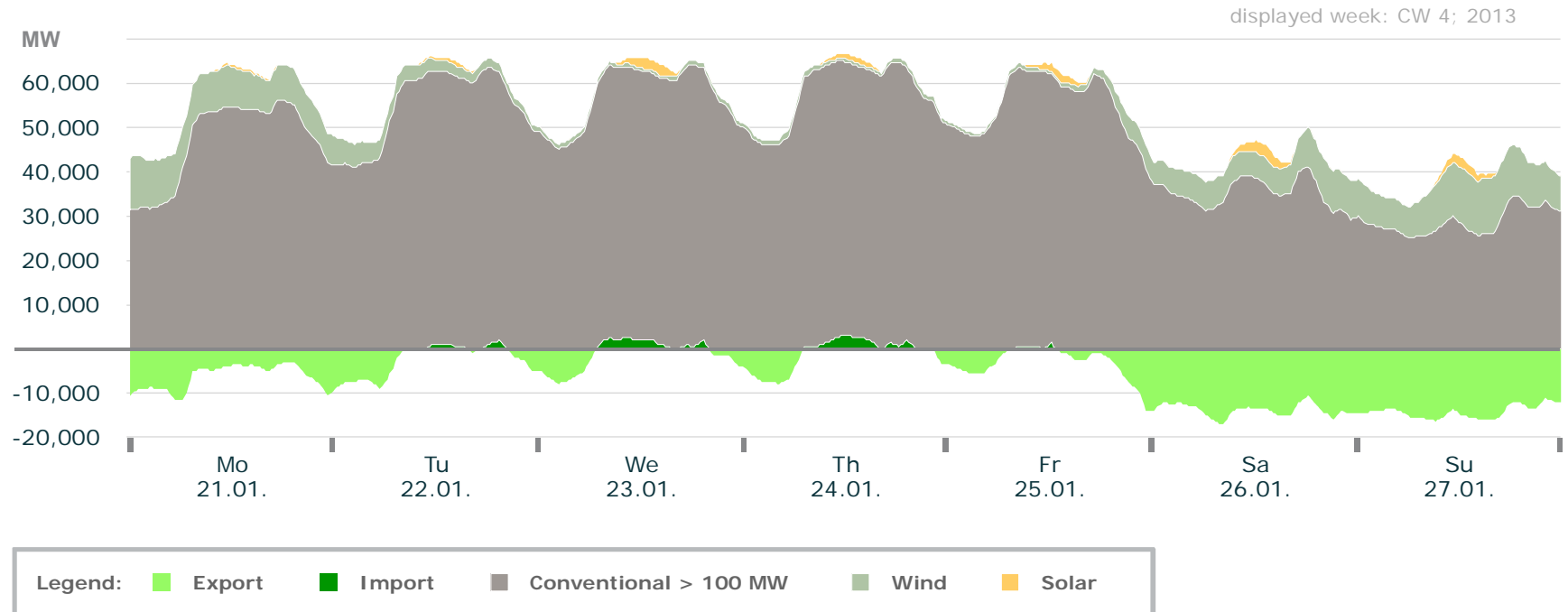
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 4

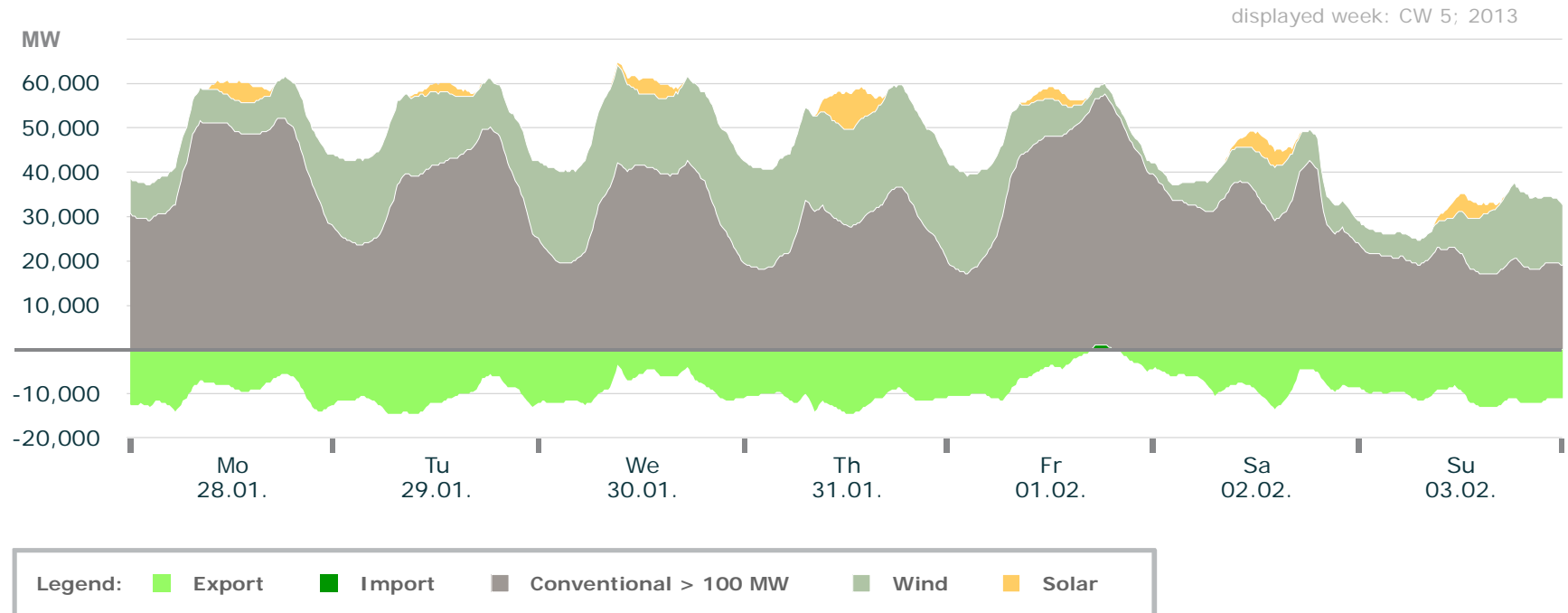
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 5

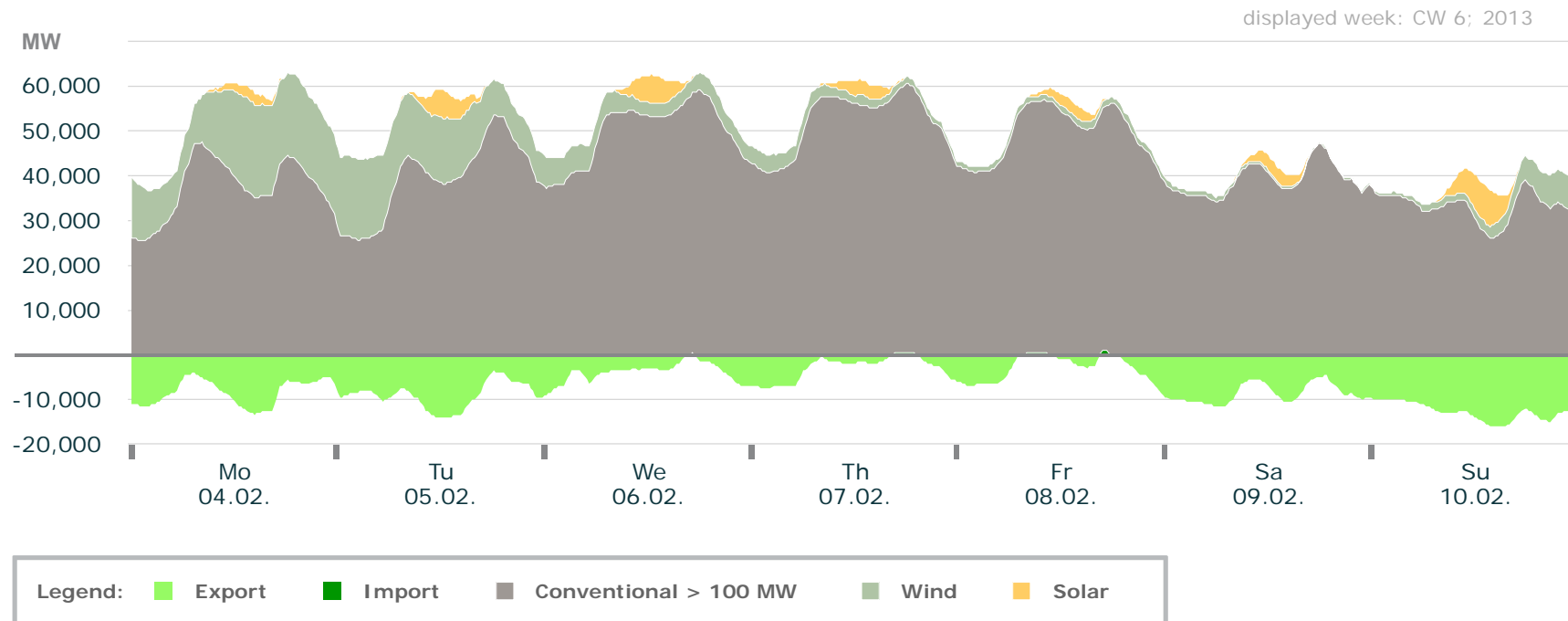
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 6

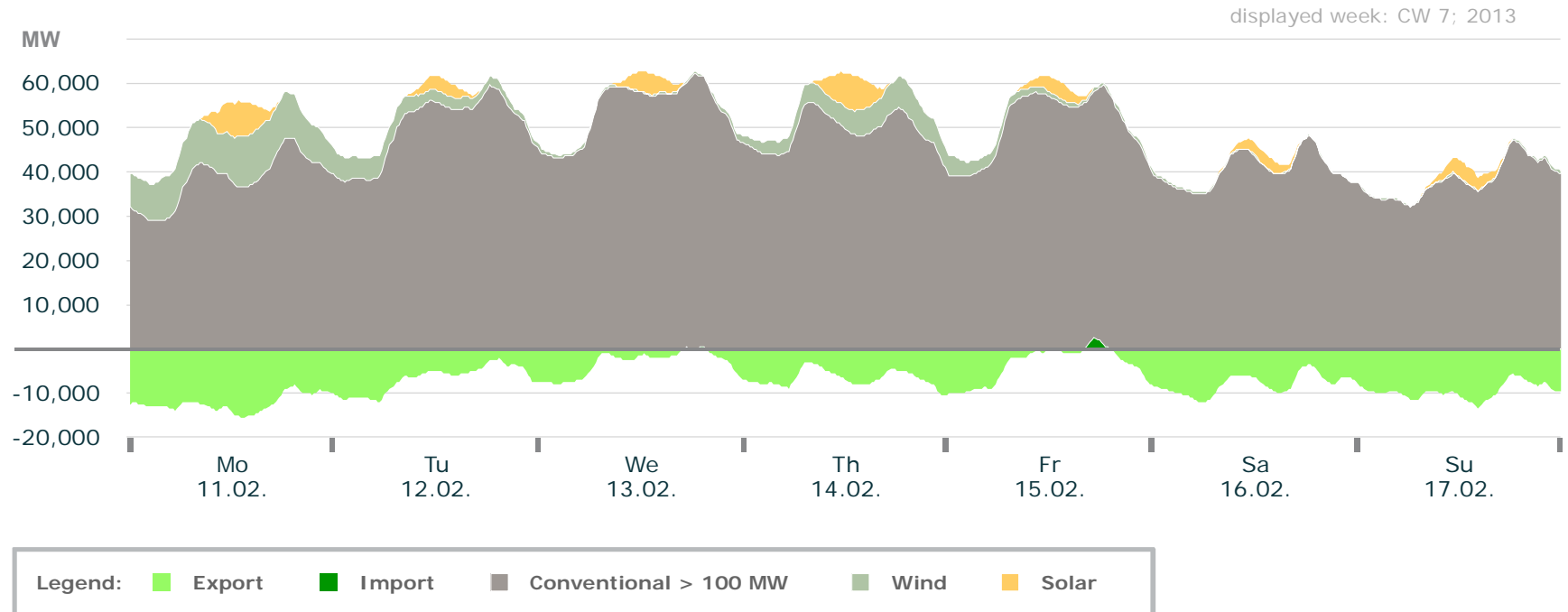
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 7

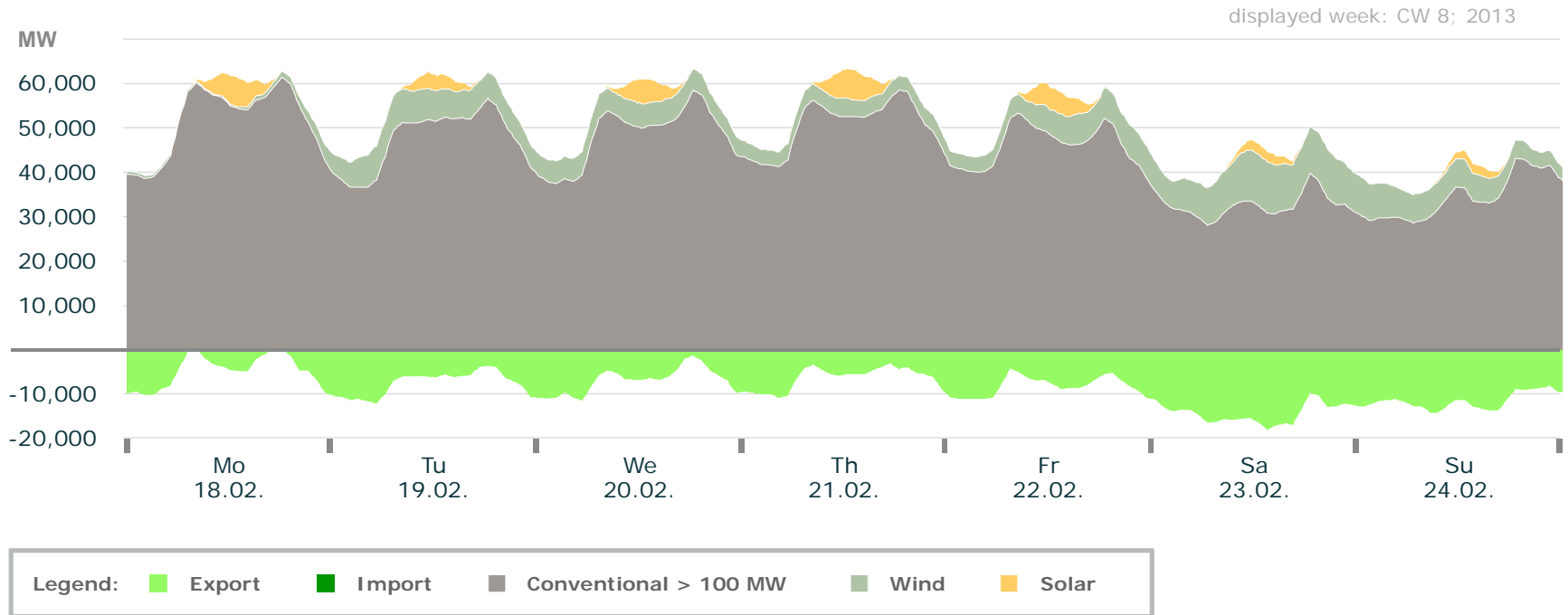
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 8

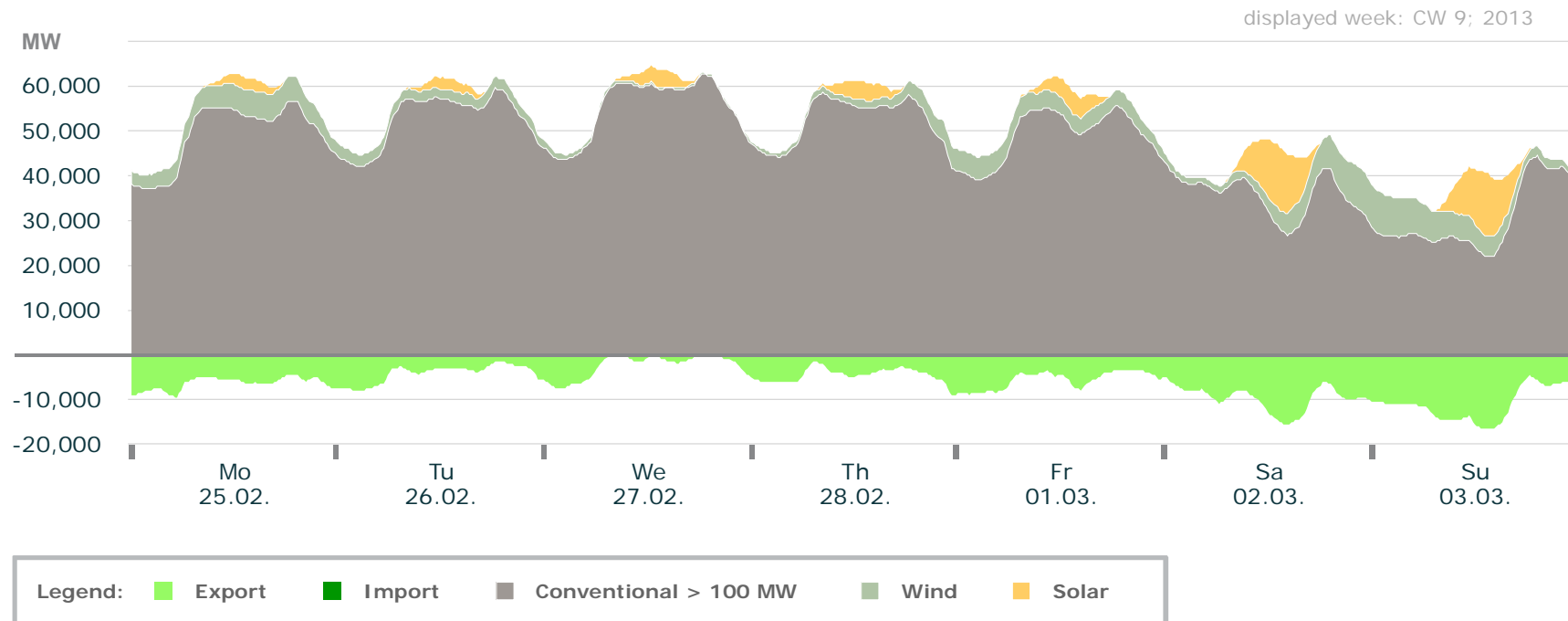
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 9

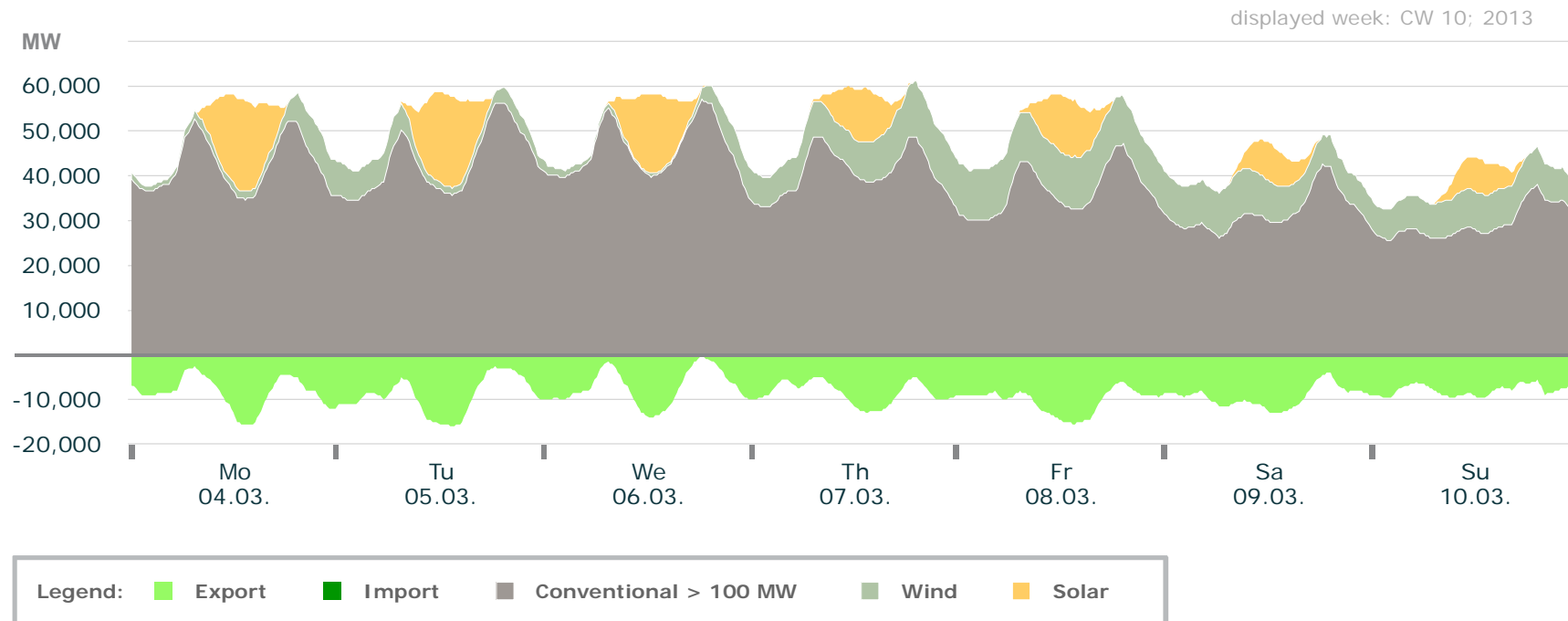
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 10

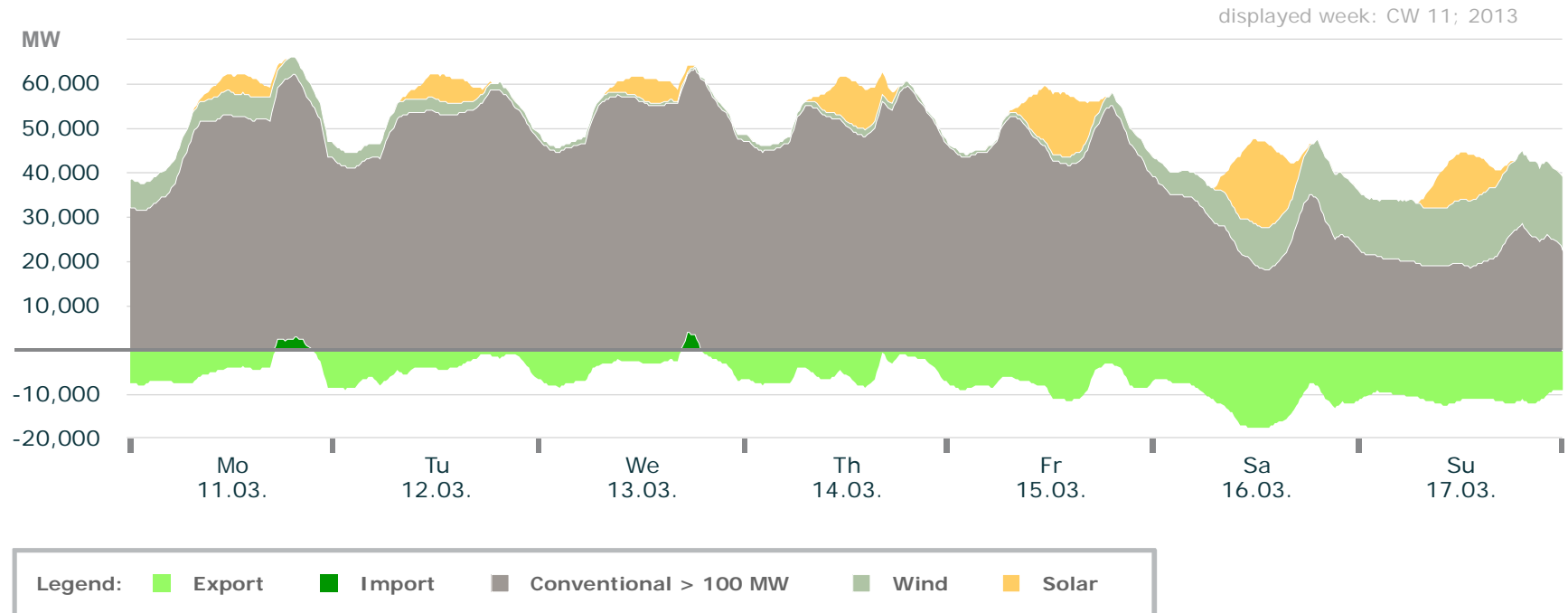
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 11

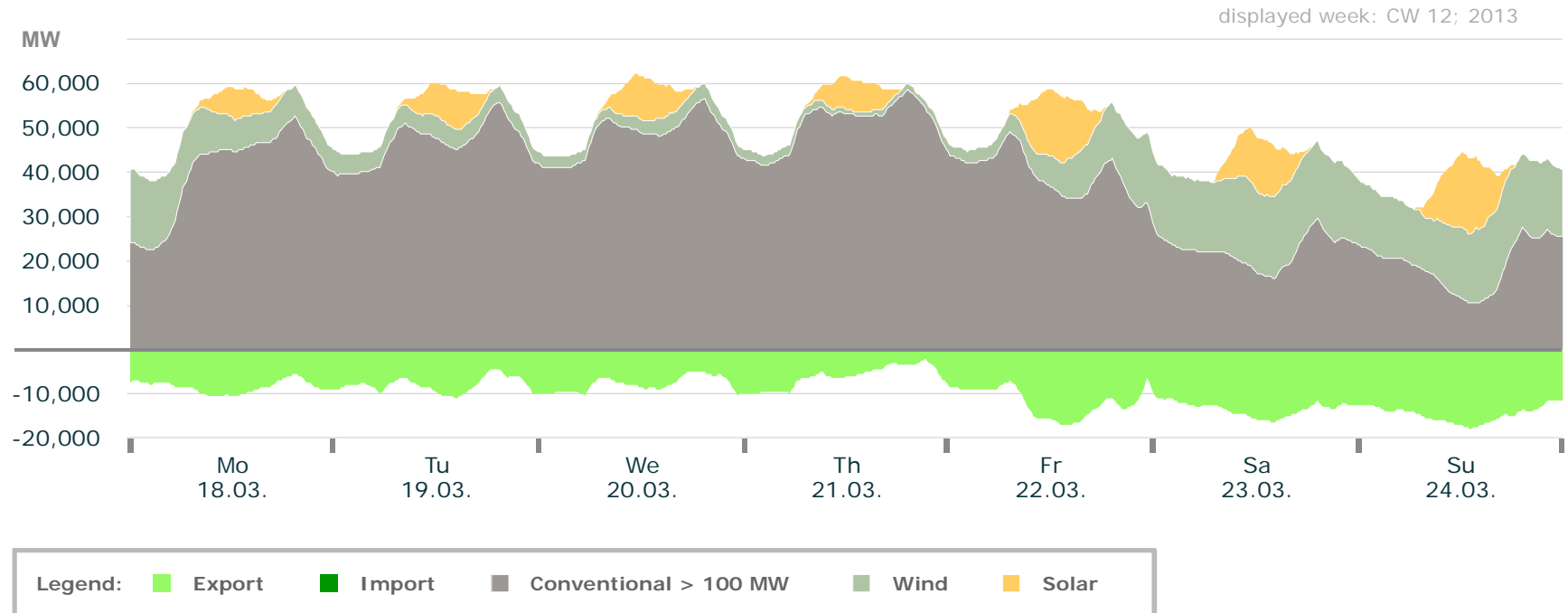
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 12

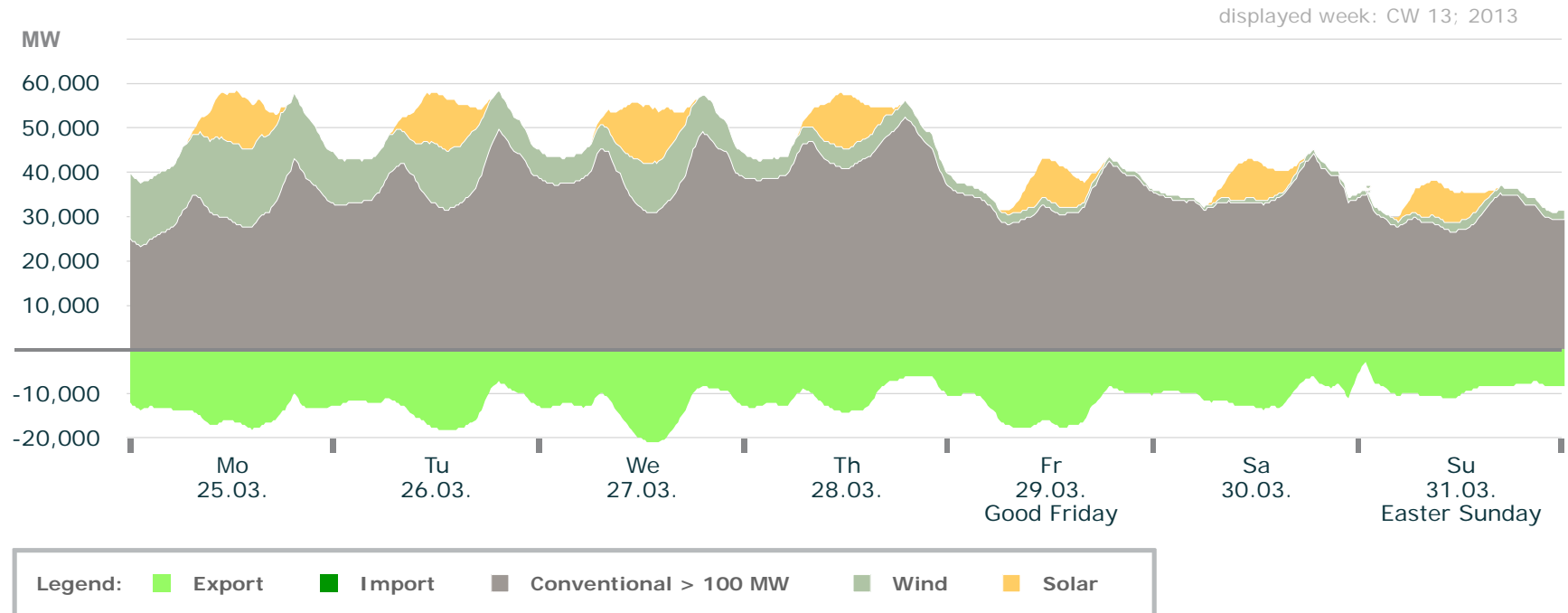
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 13

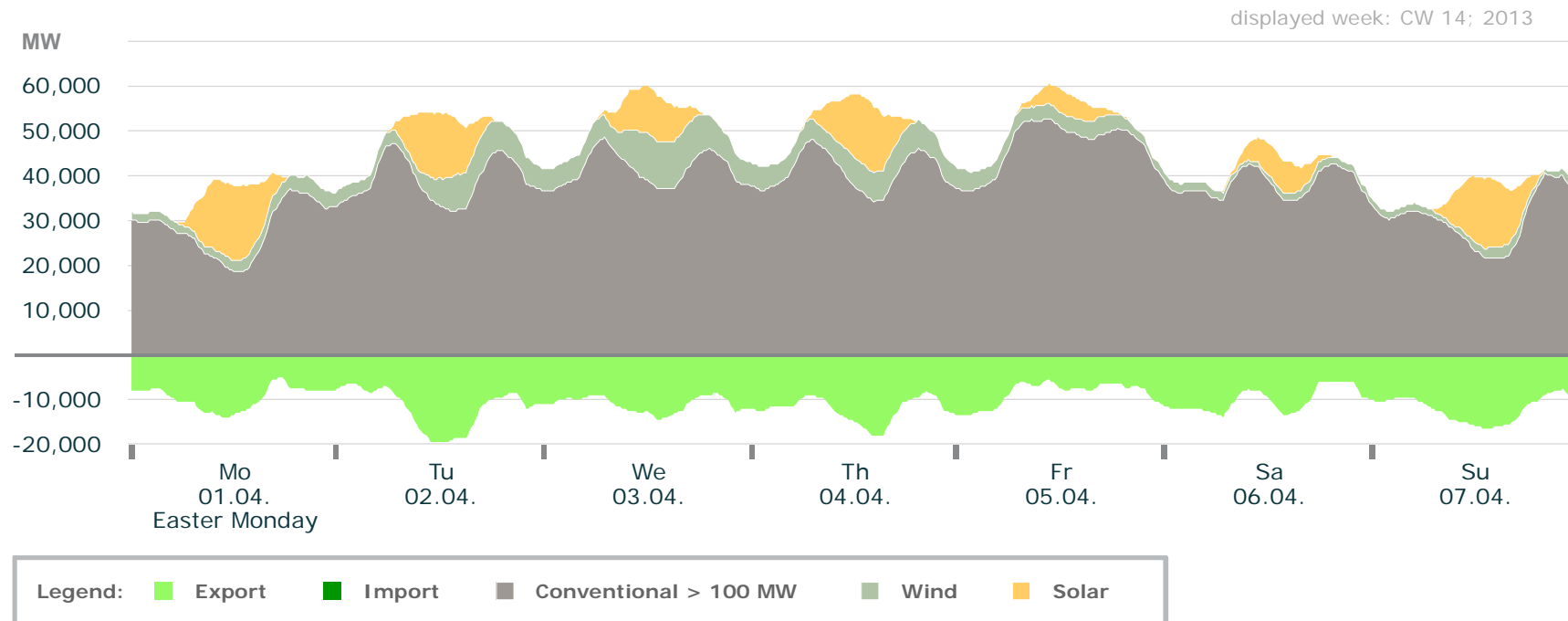
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 14

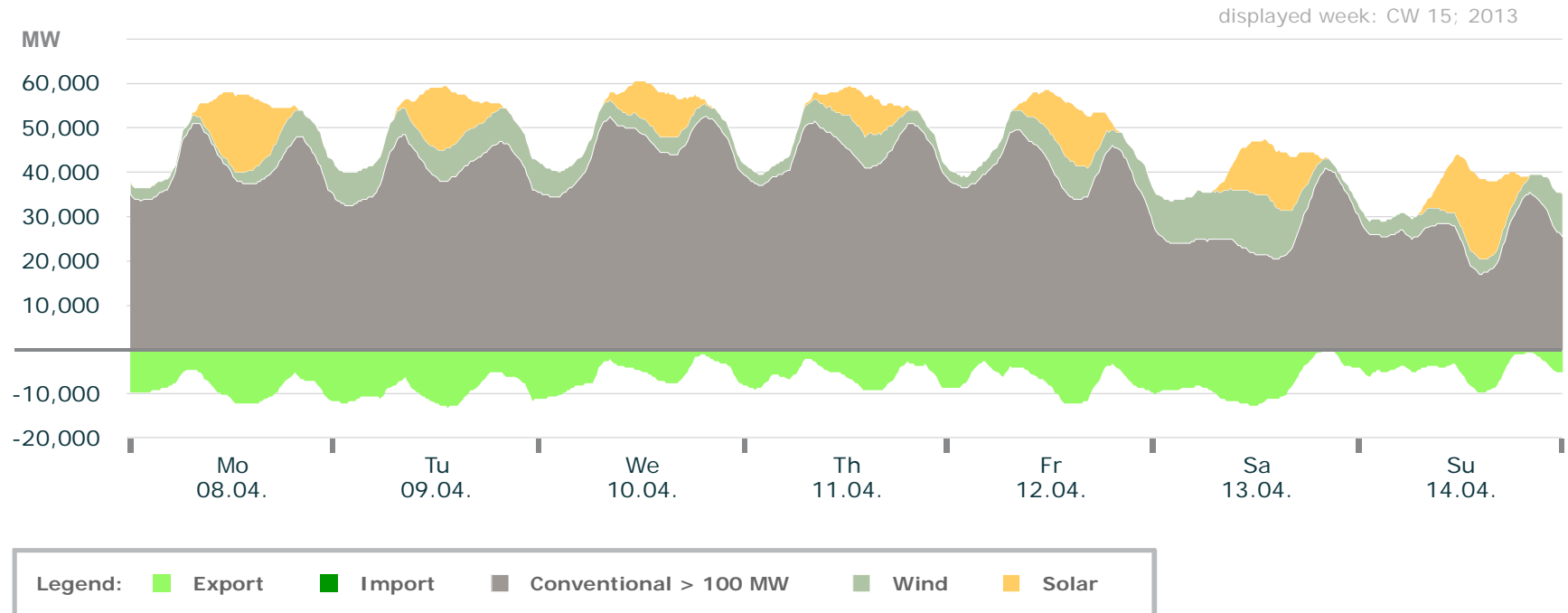
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 15

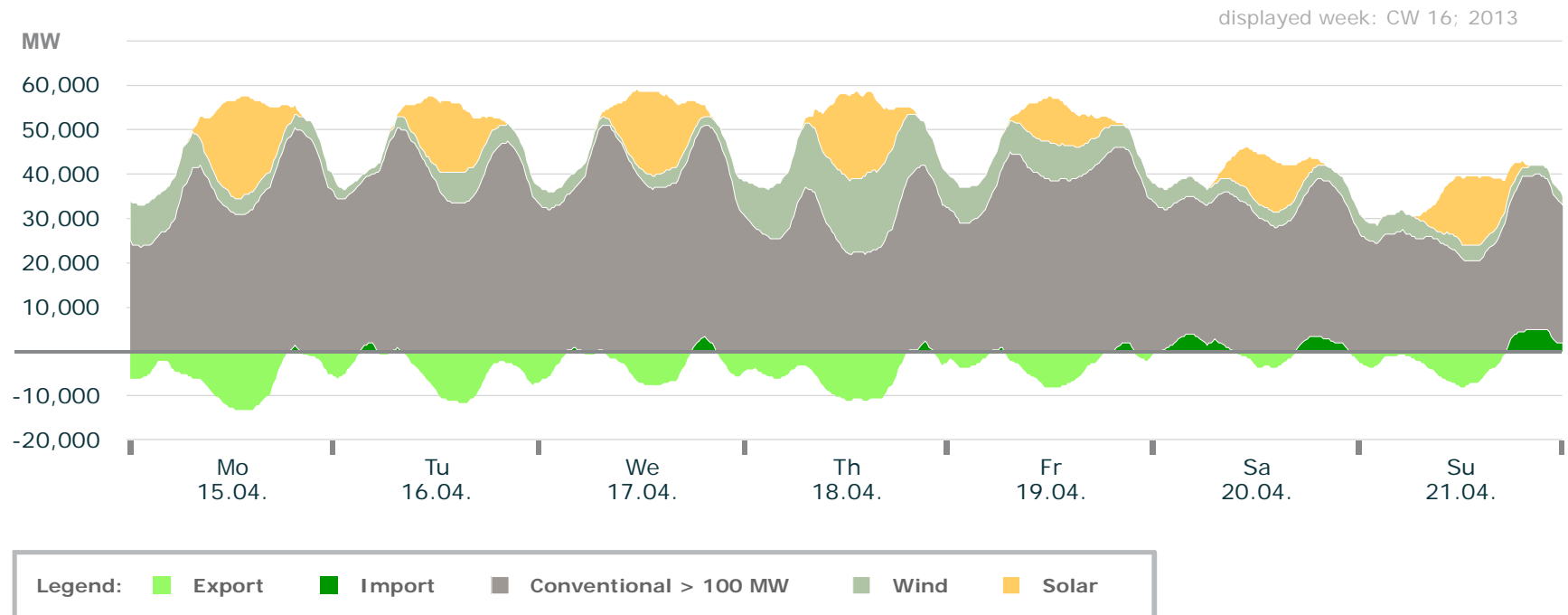
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 16

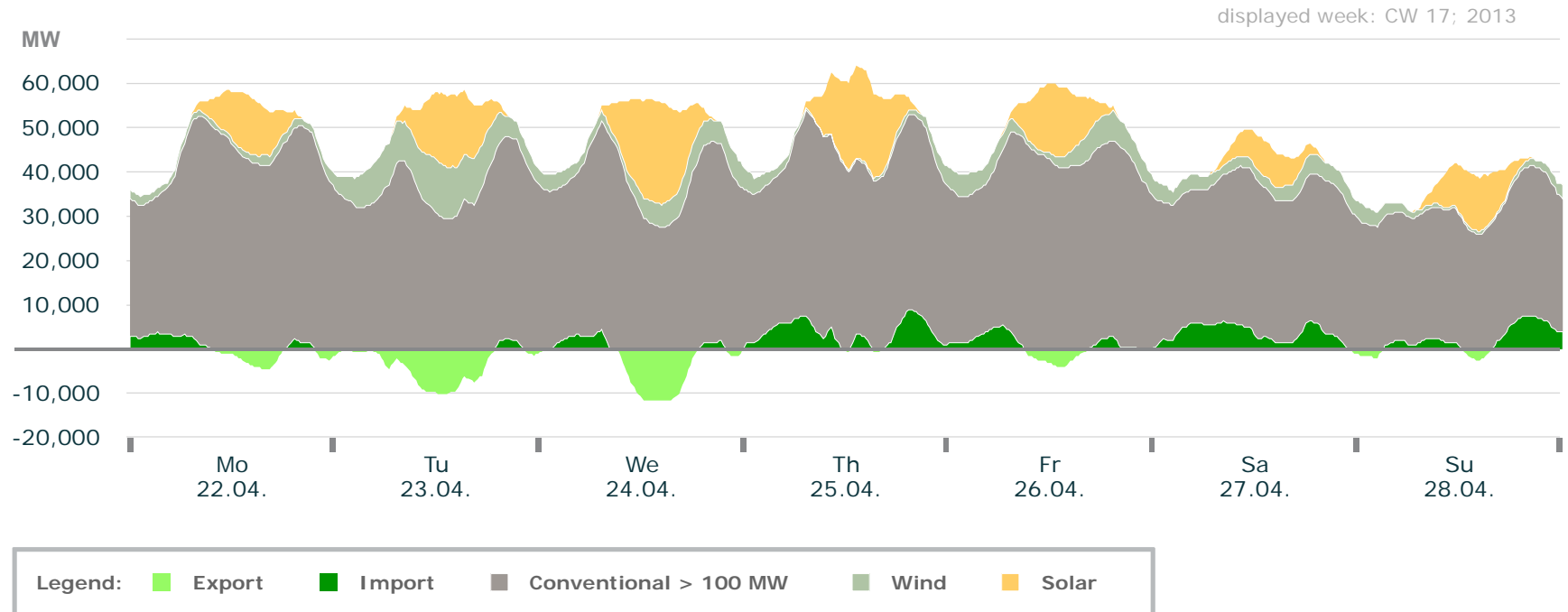
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 17

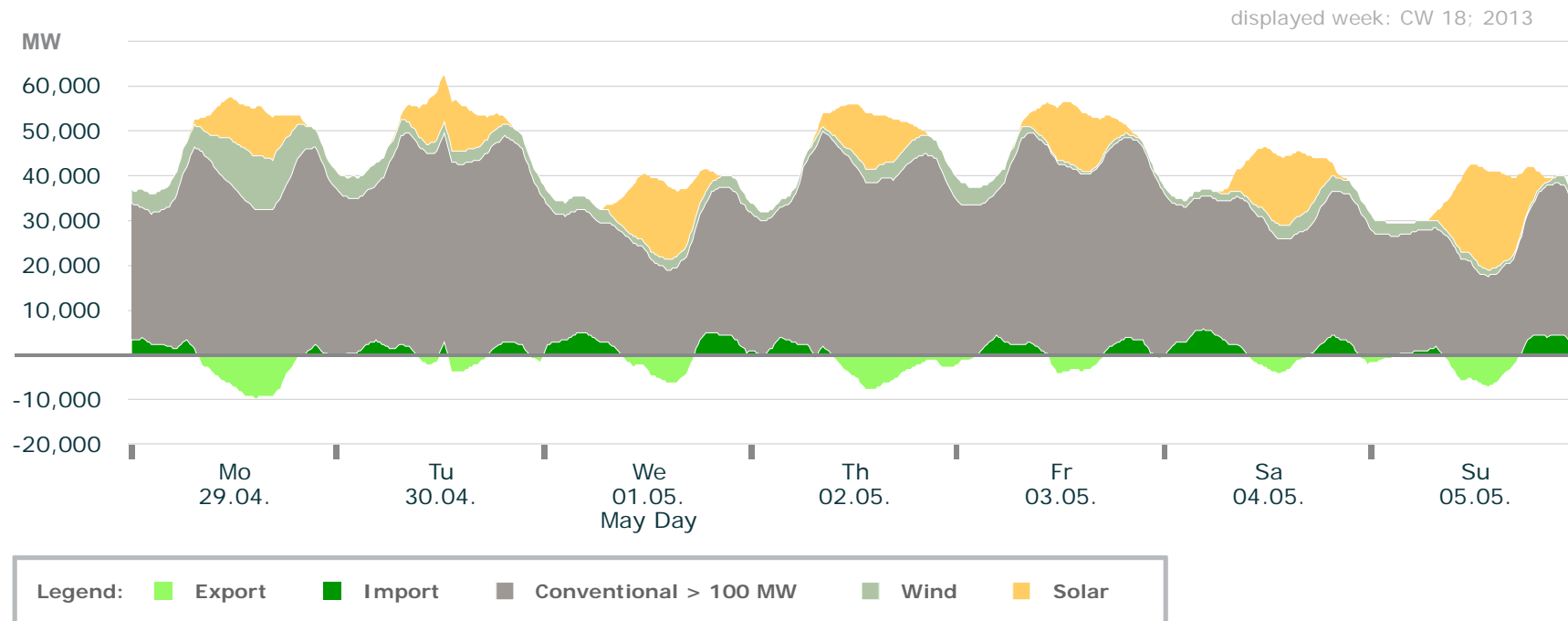
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 18

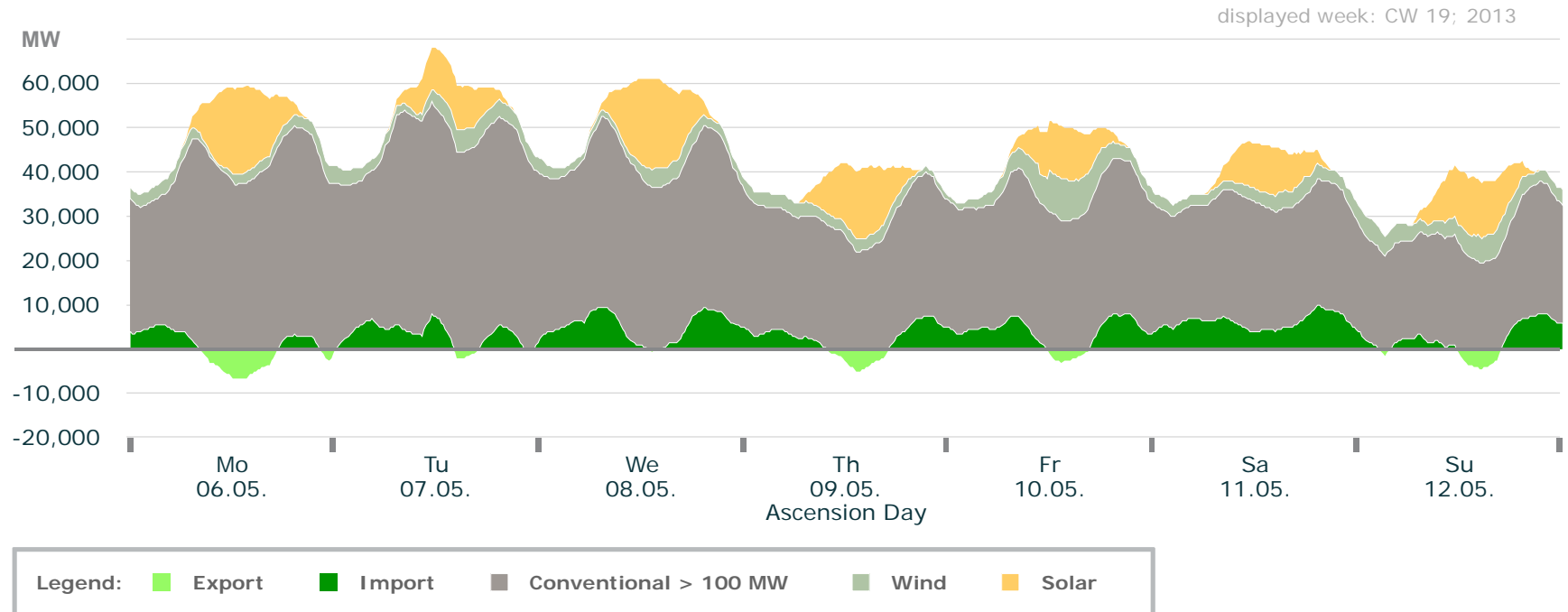
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 19

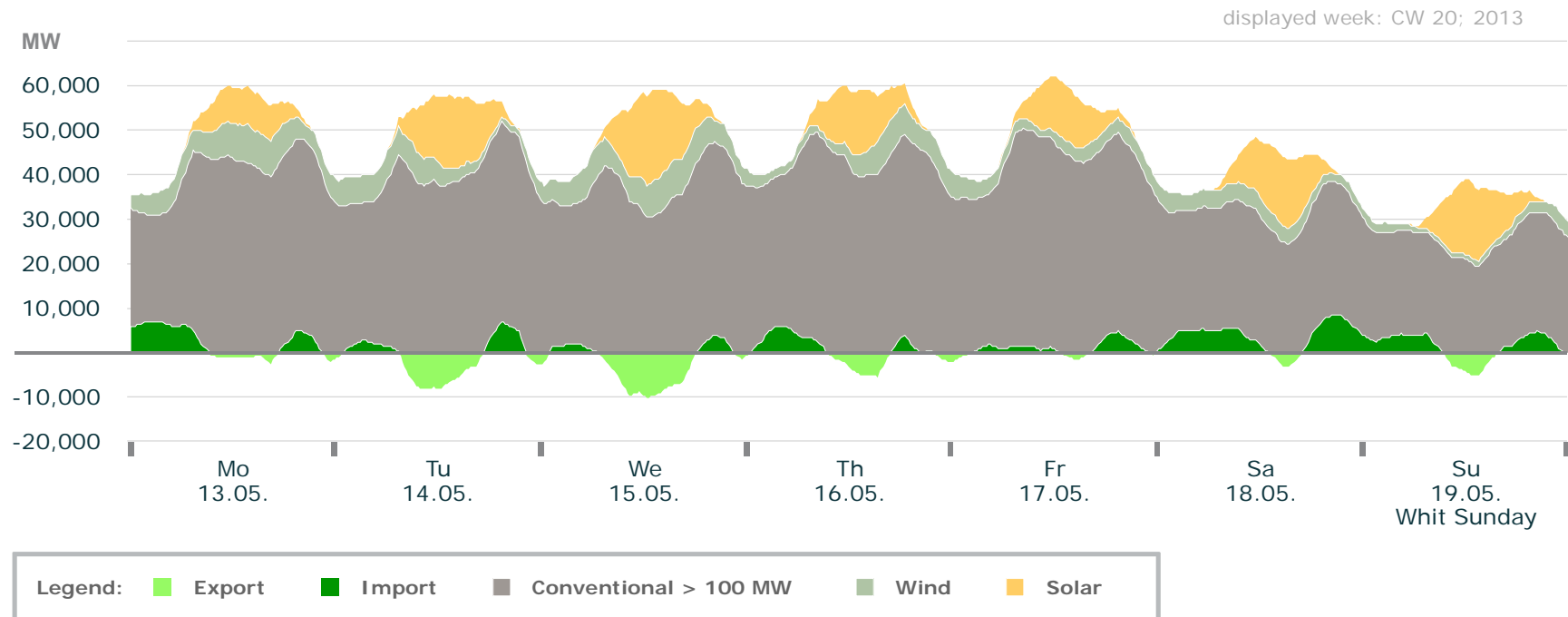
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 20

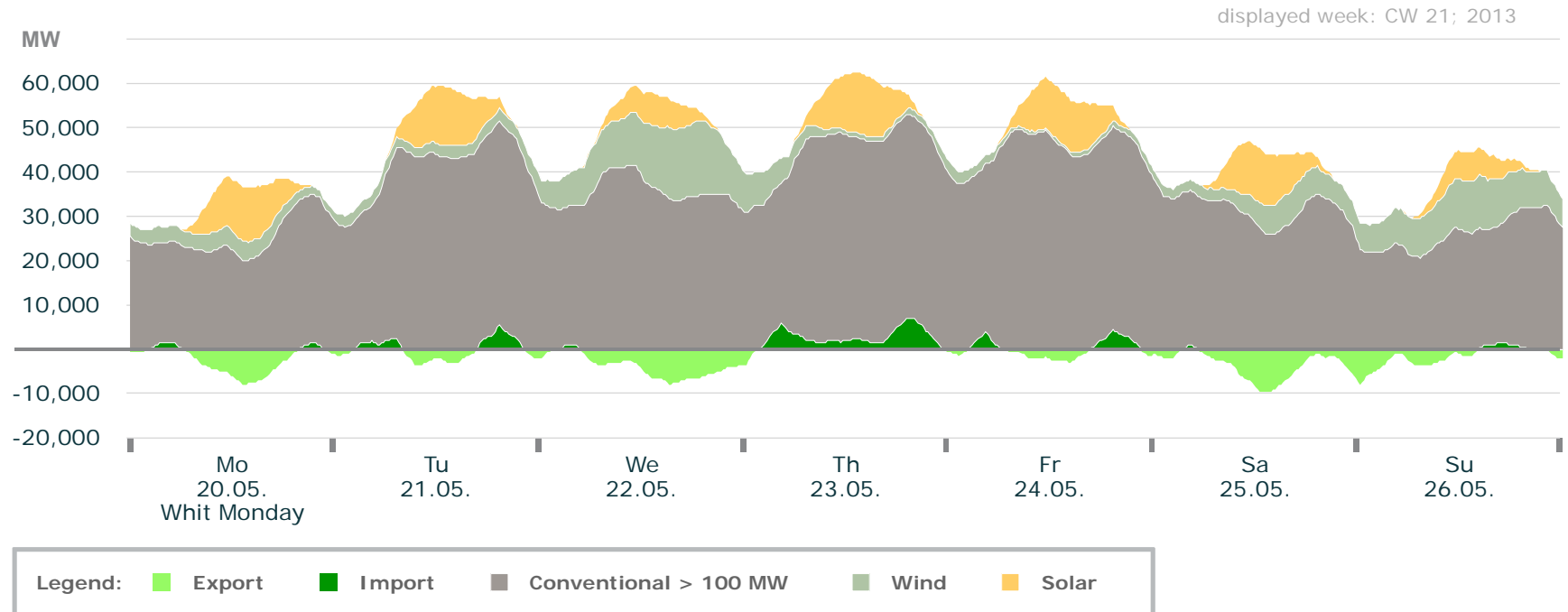
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 21

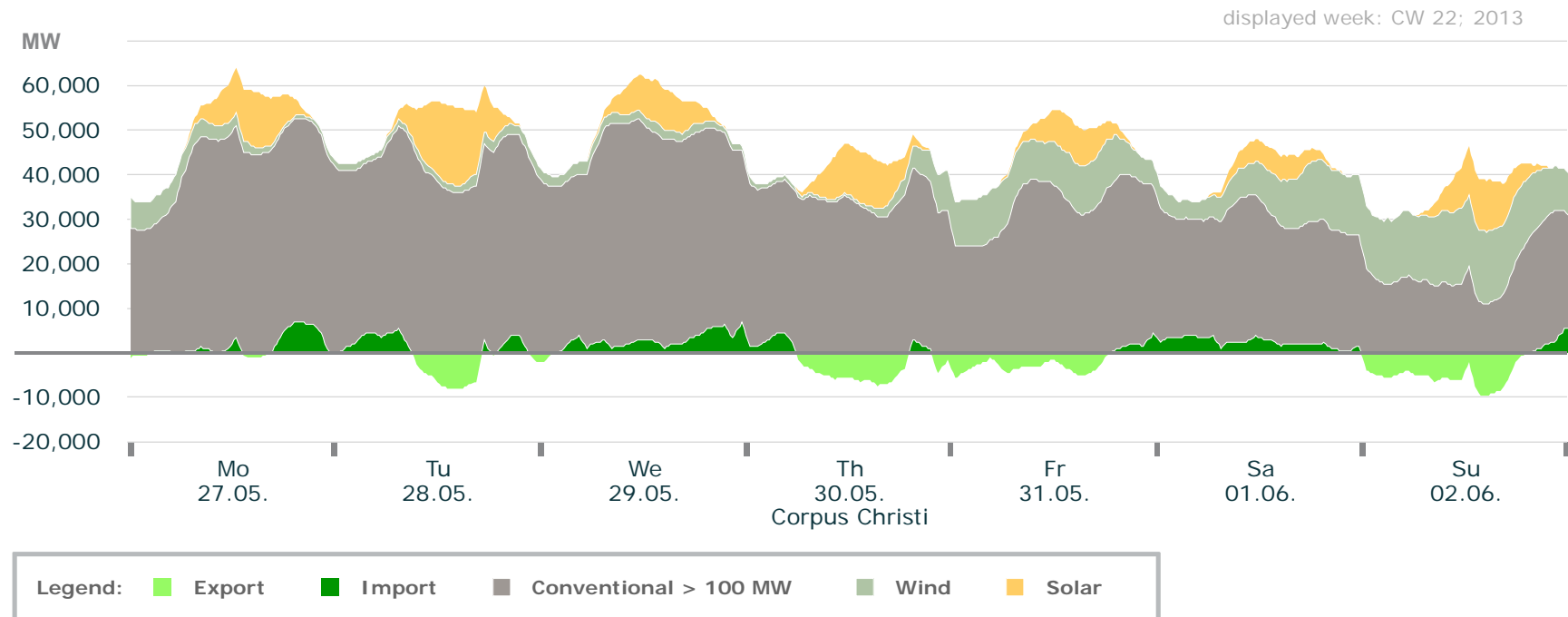
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 22

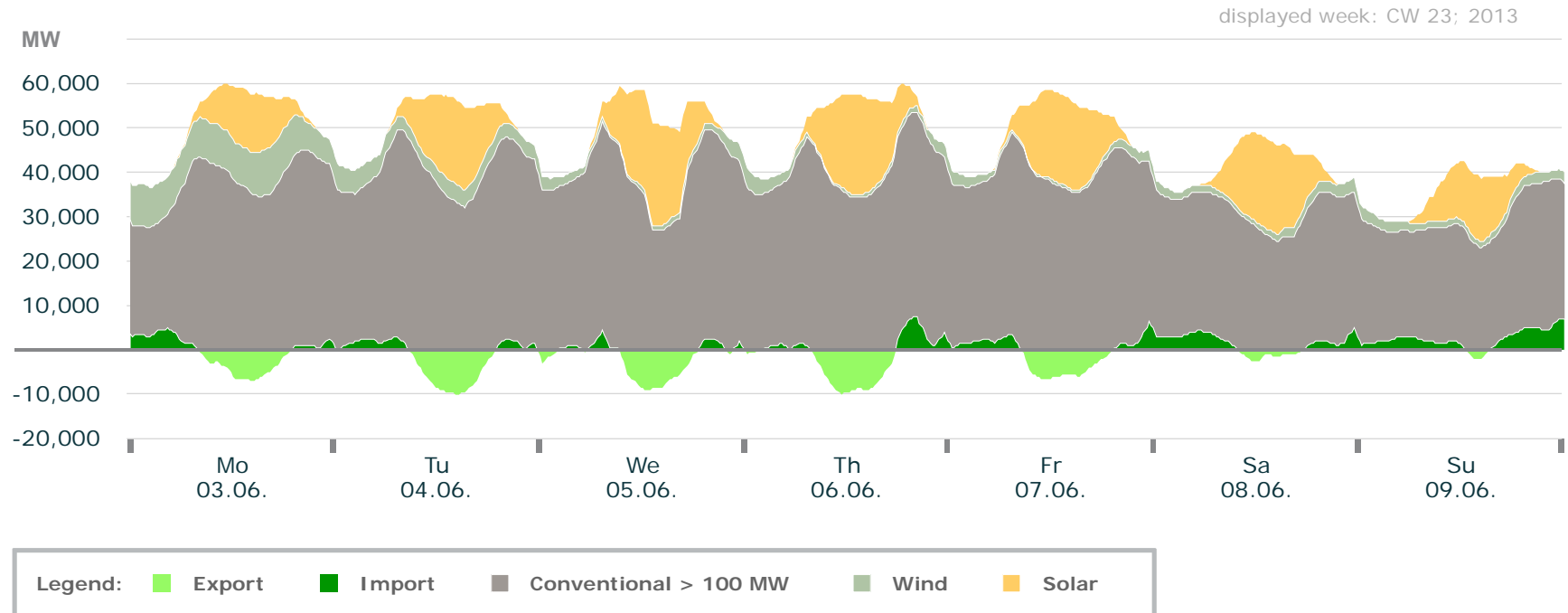
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 23

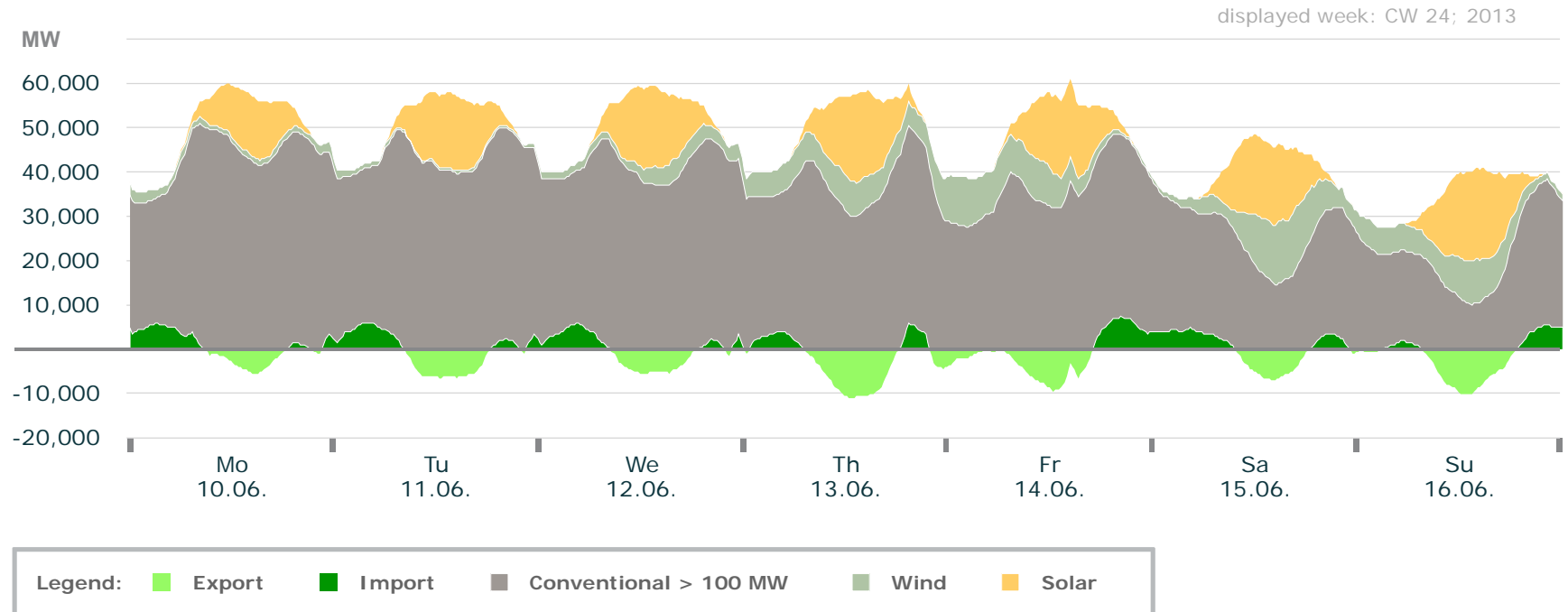
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 24

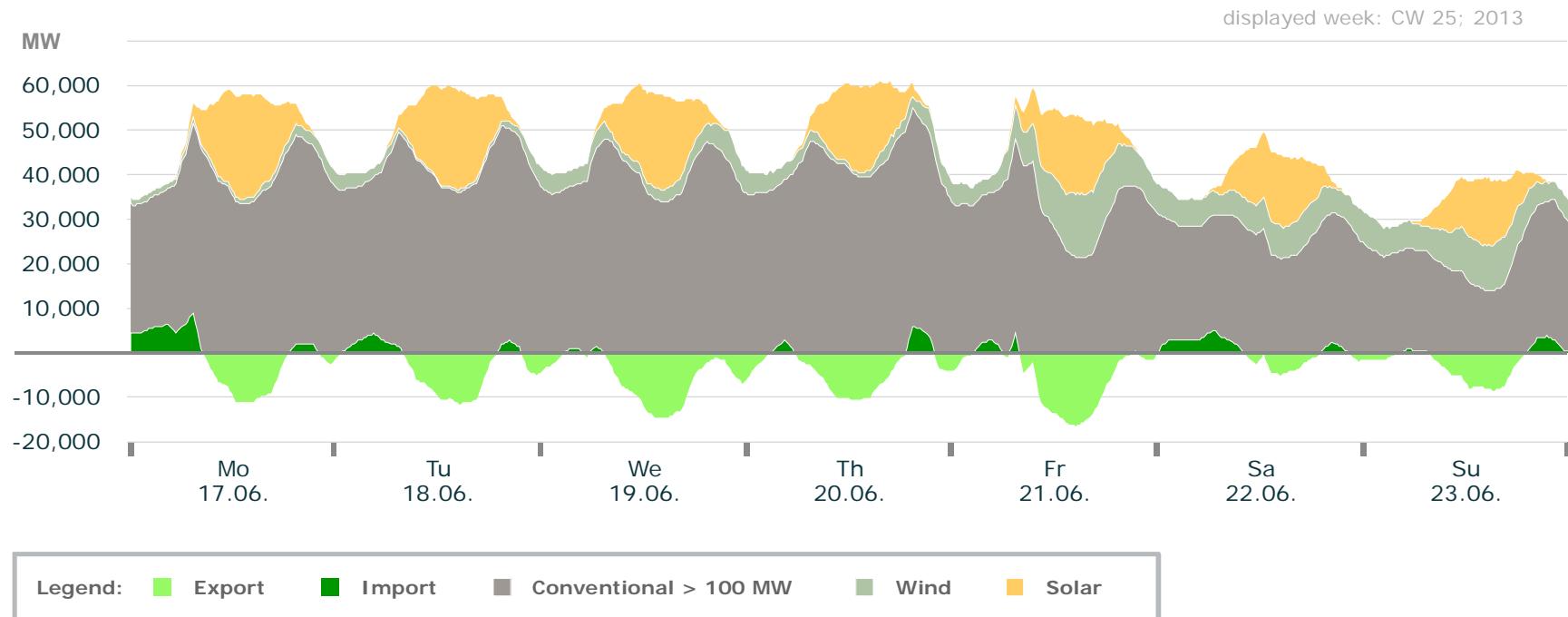
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 25

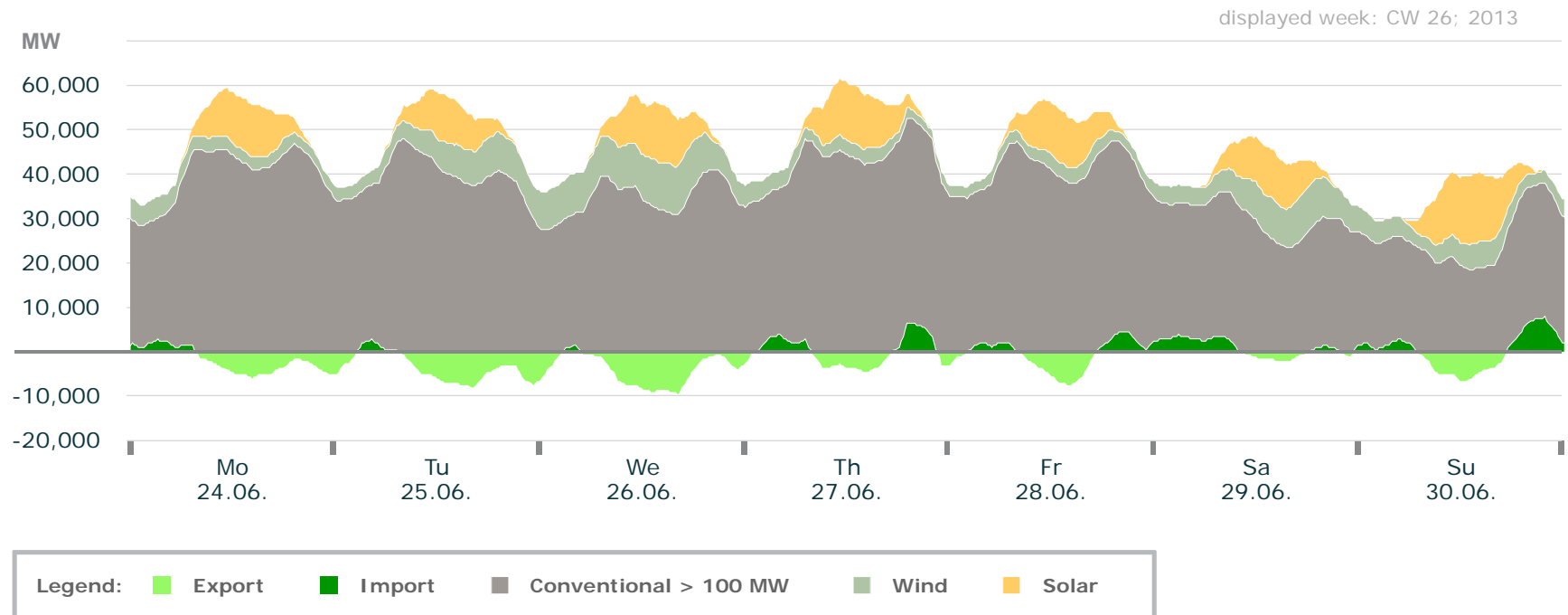
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 26

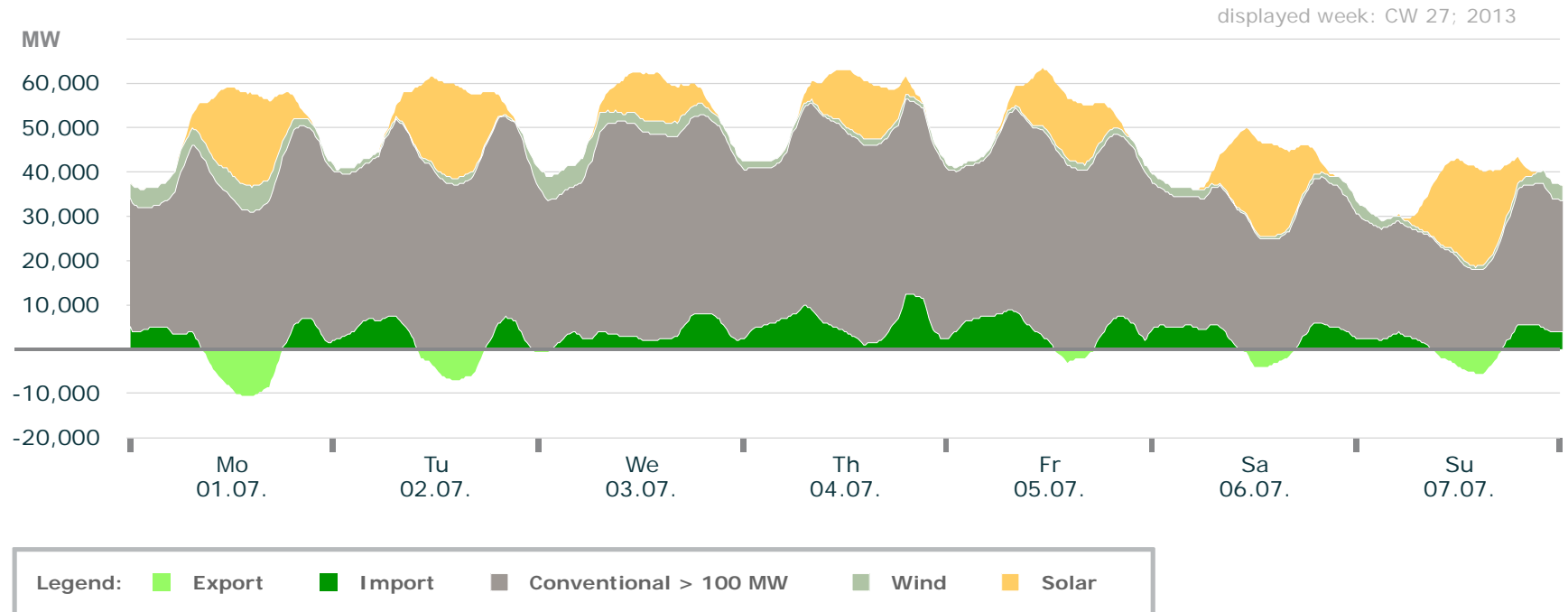
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 27

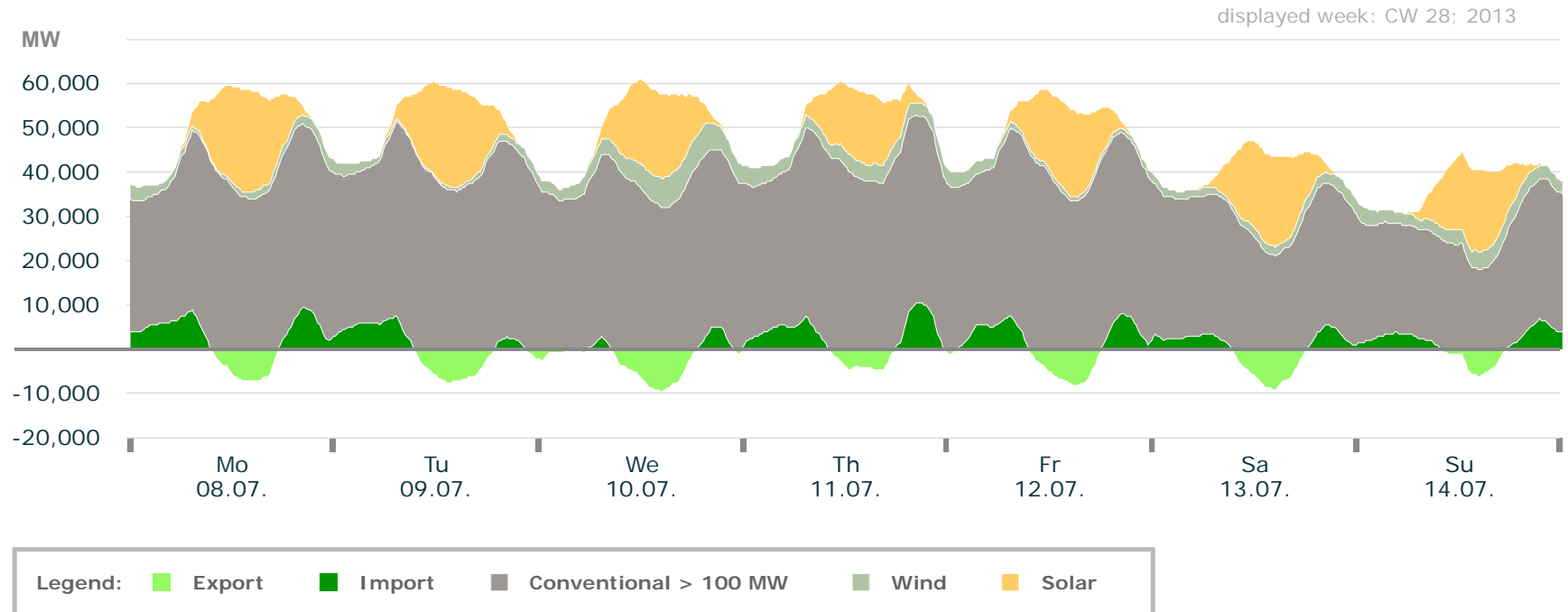
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 28

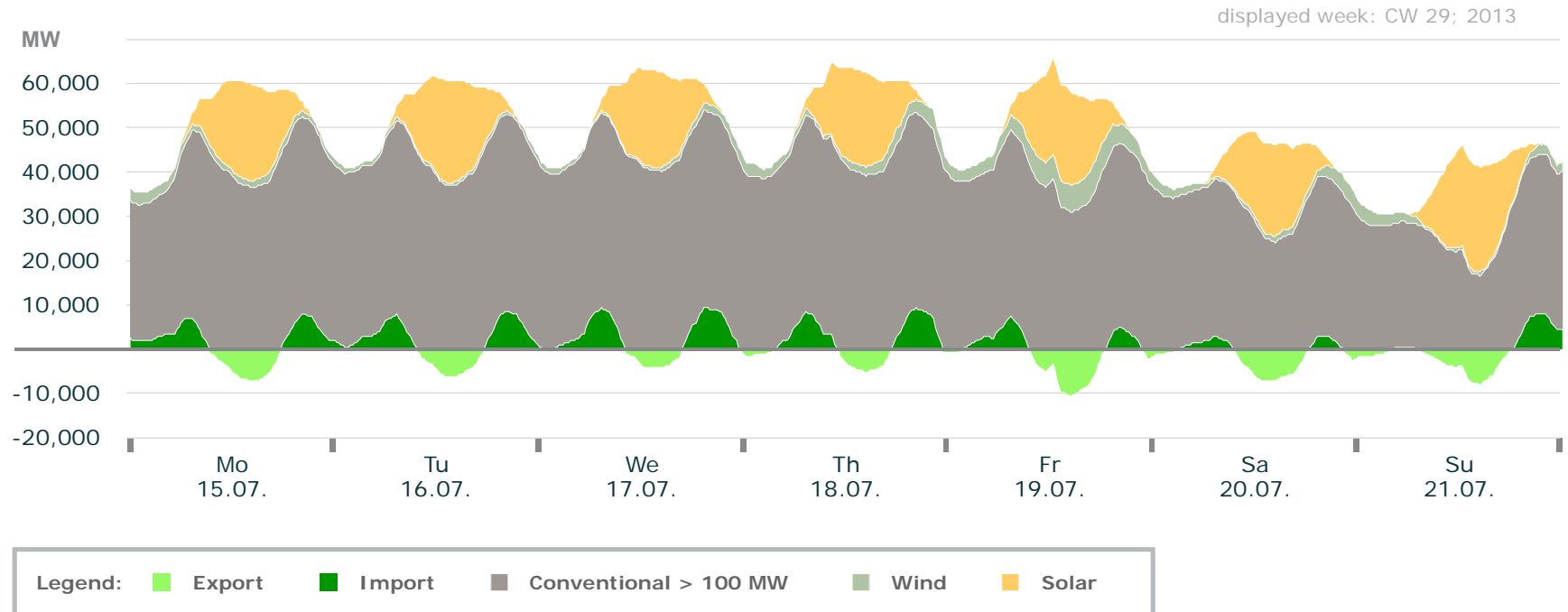
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 29

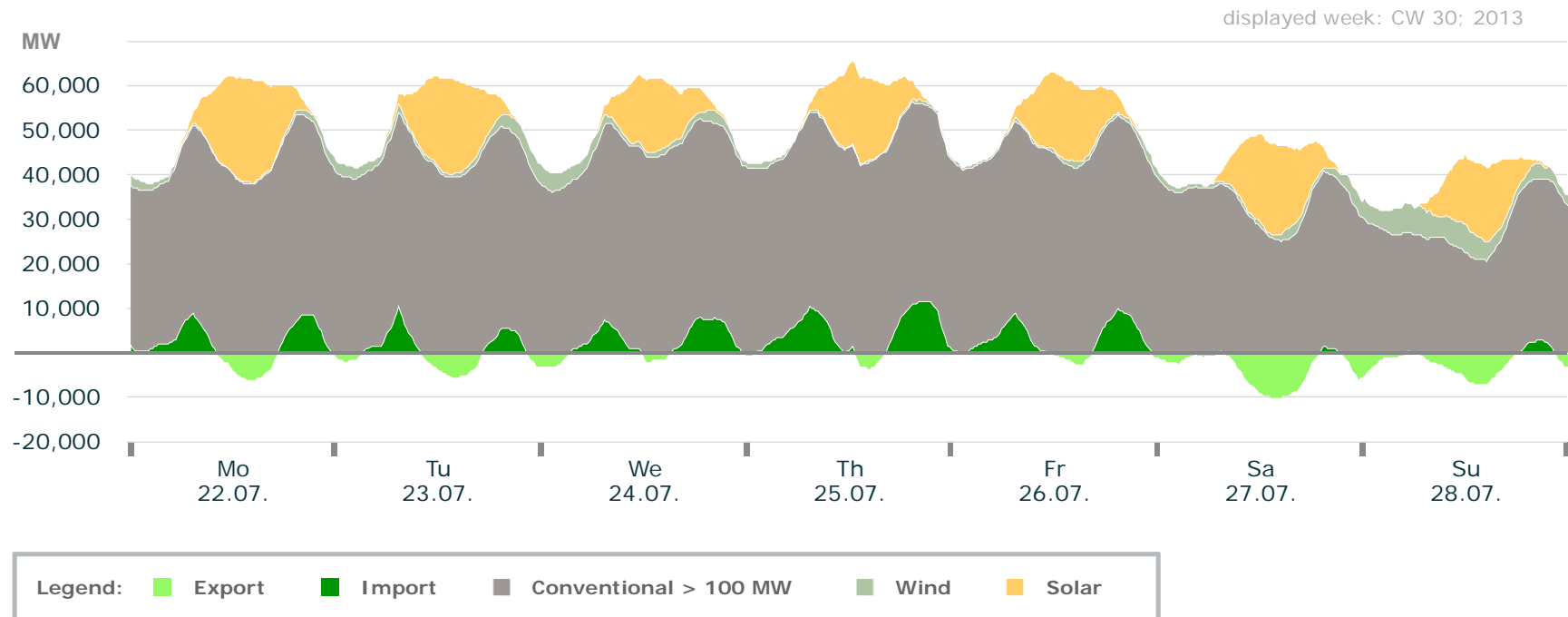
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 30

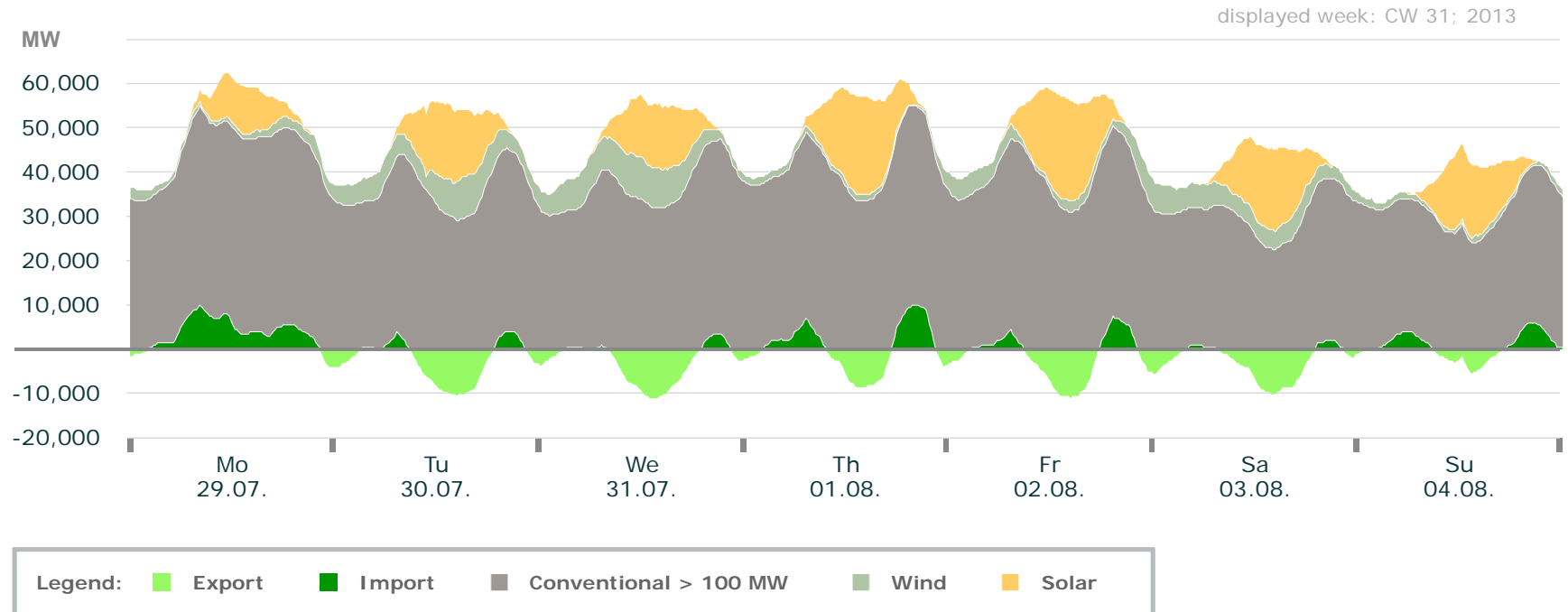
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 31

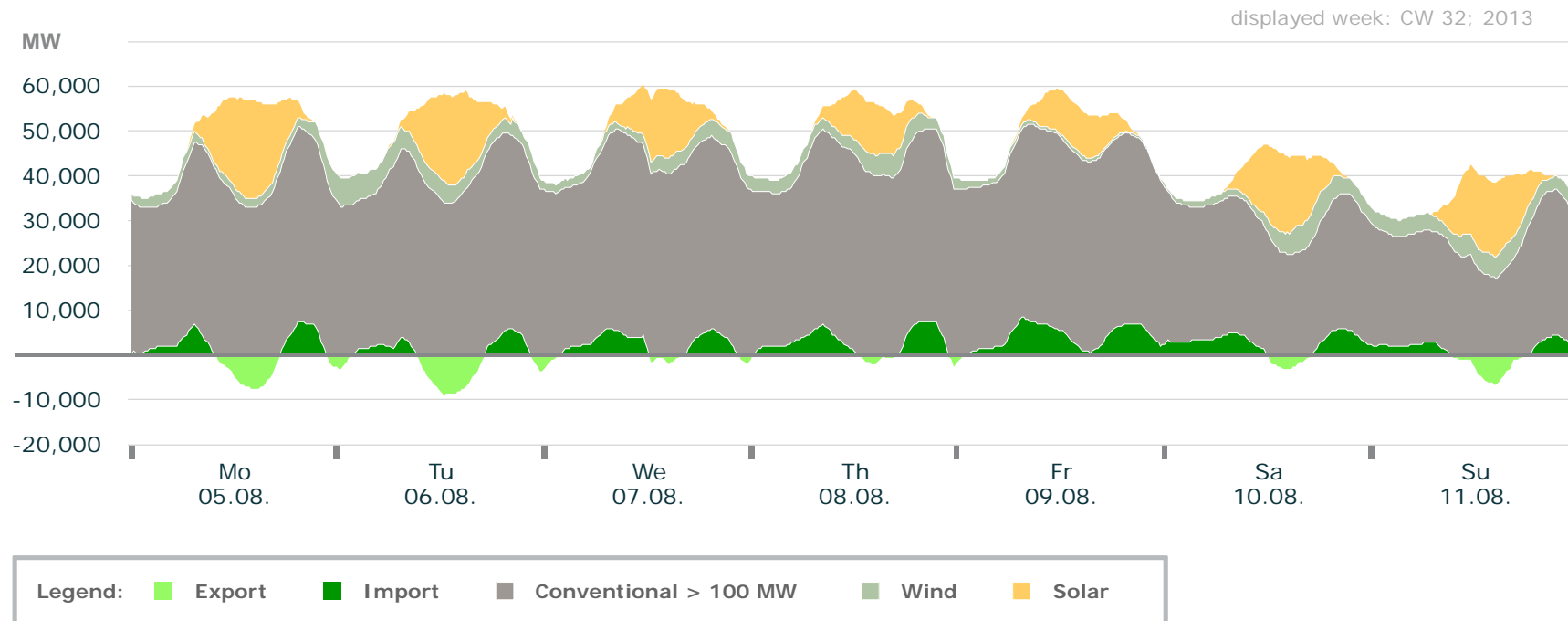
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 32

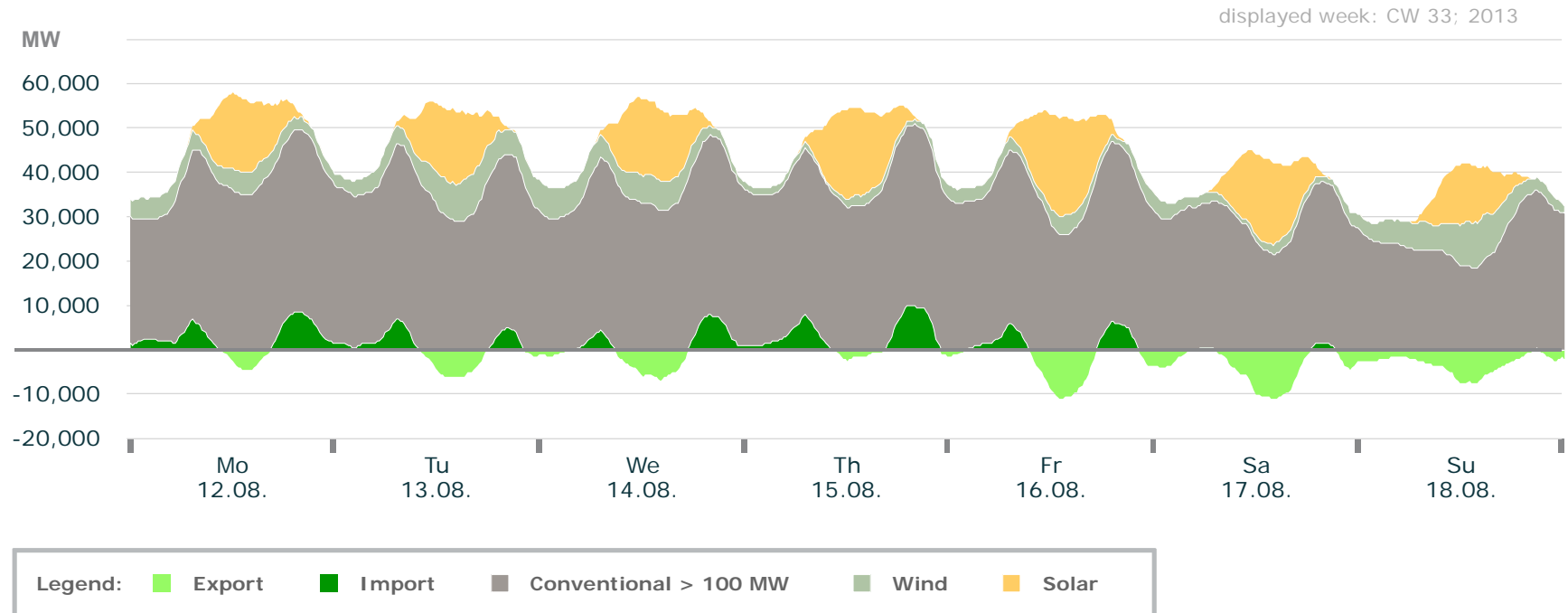
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 33

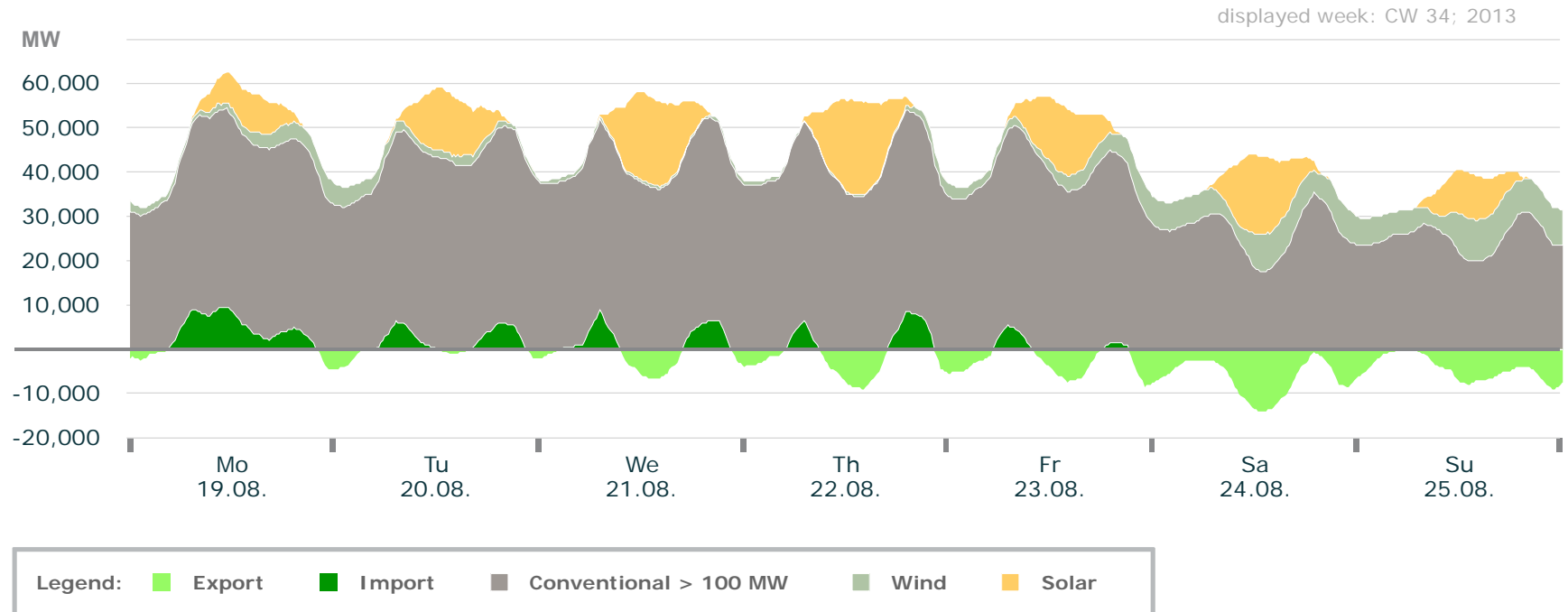
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 34

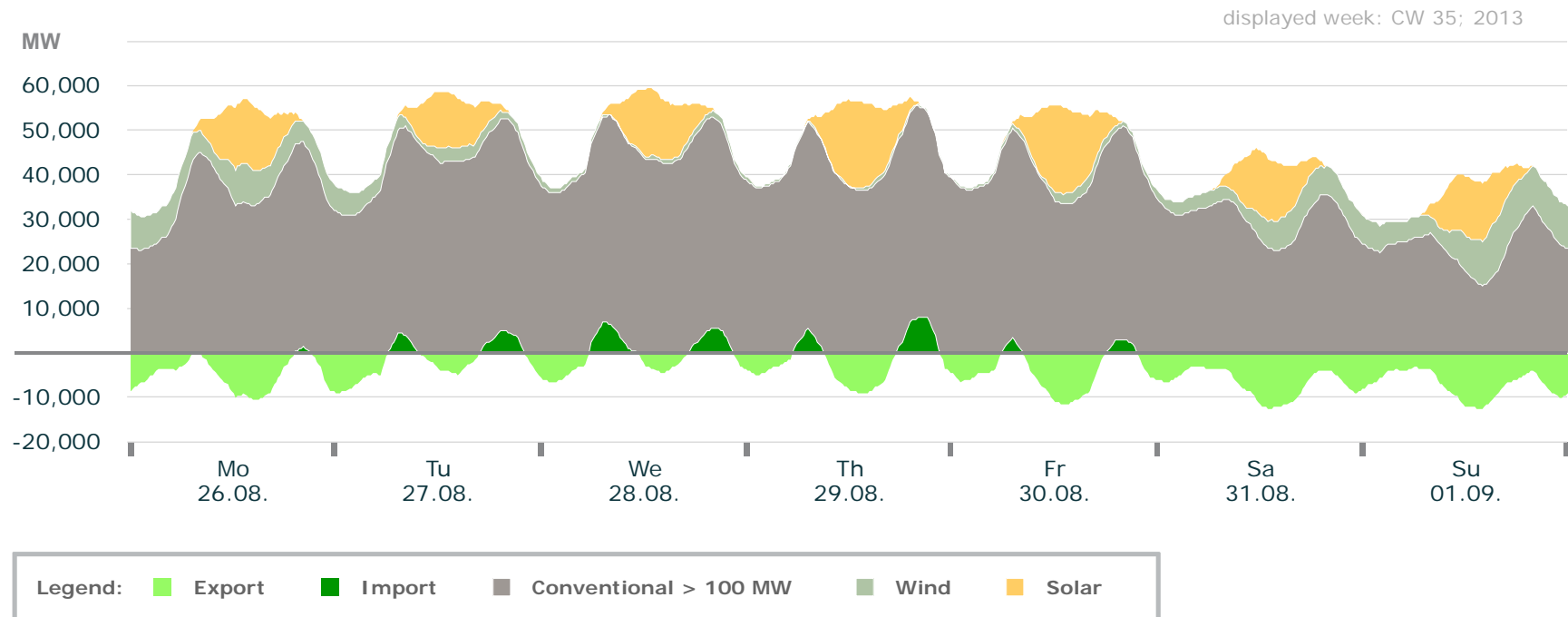
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 35

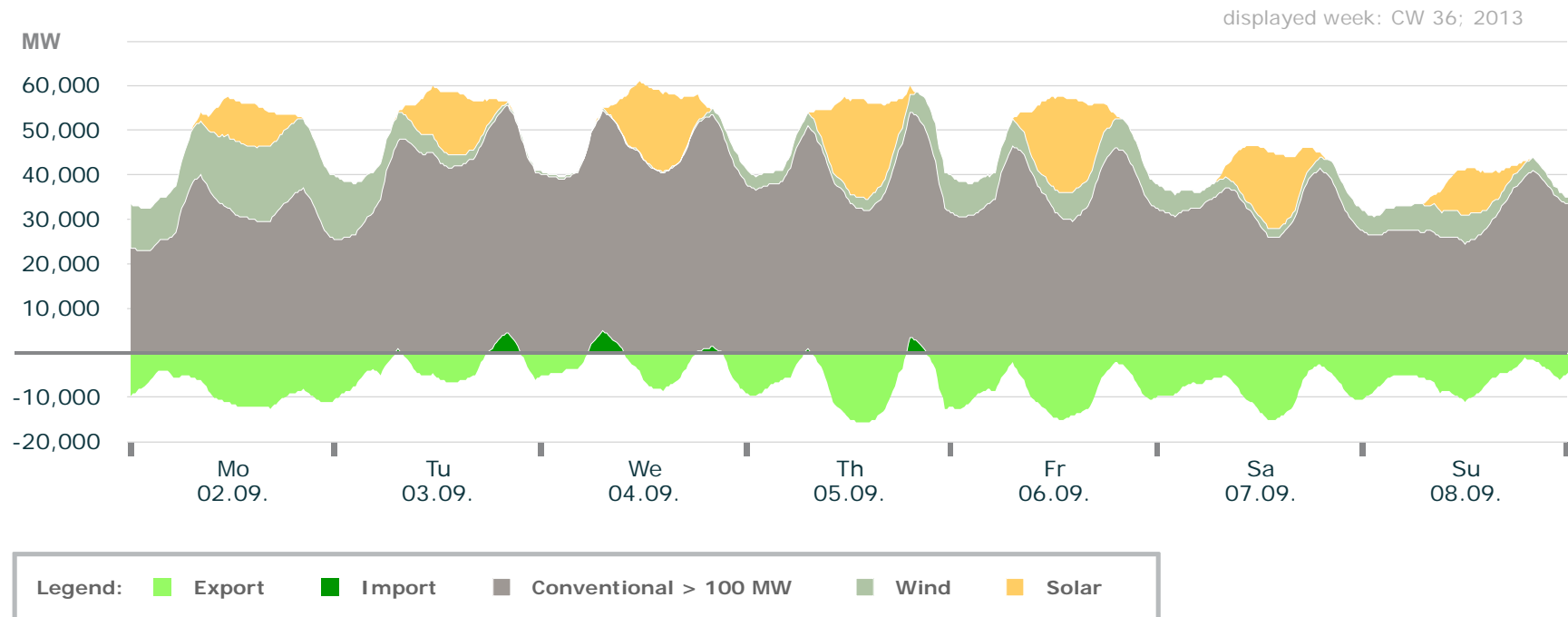
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 36

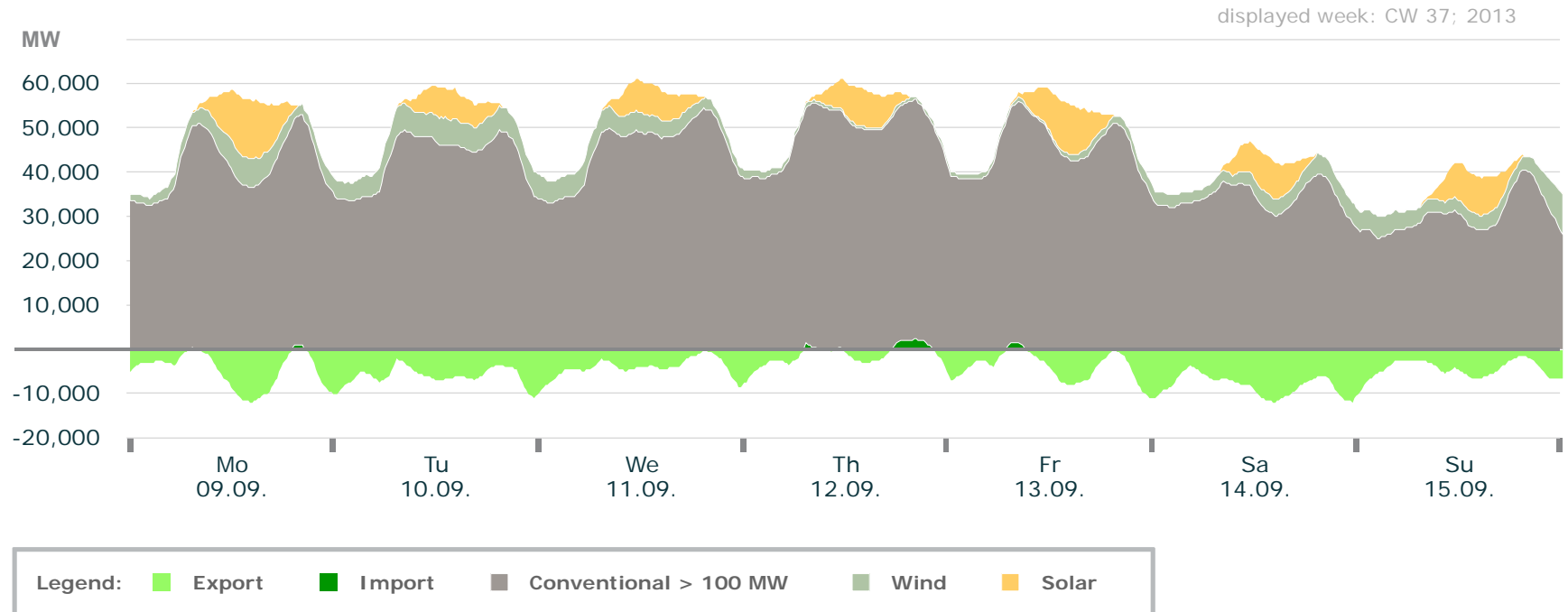
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 37

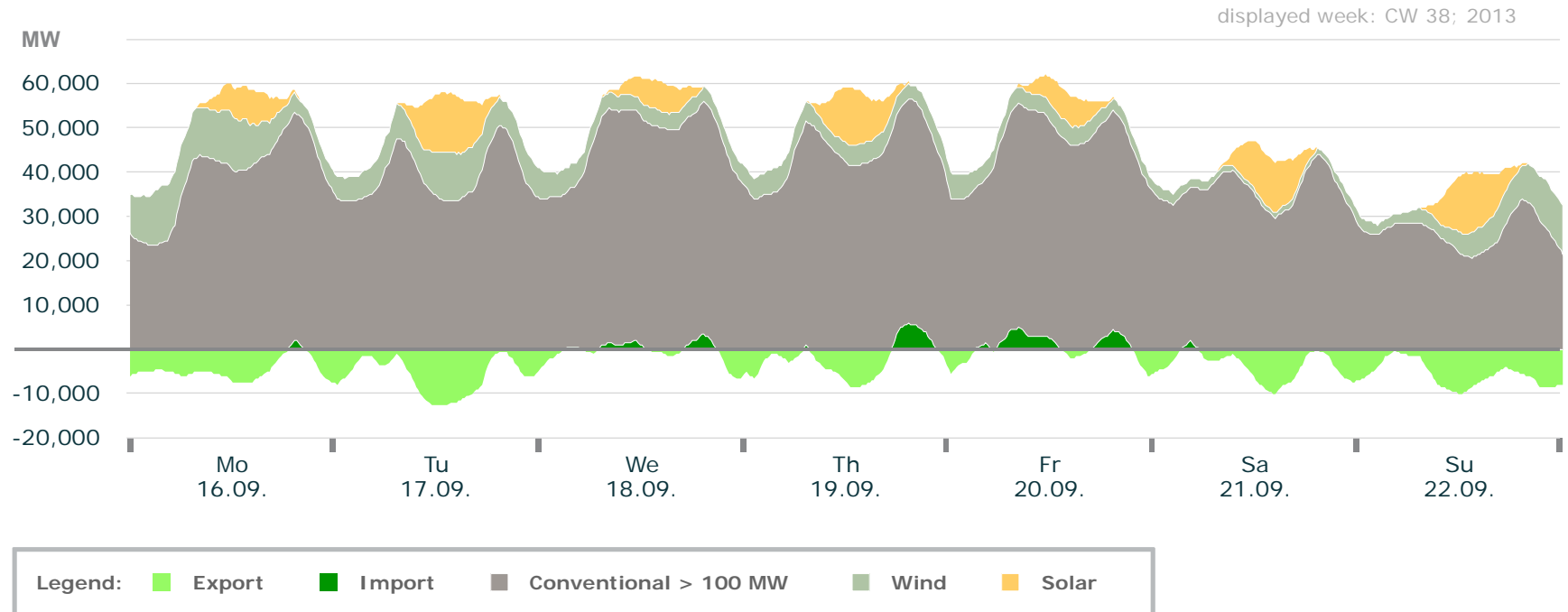
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 38

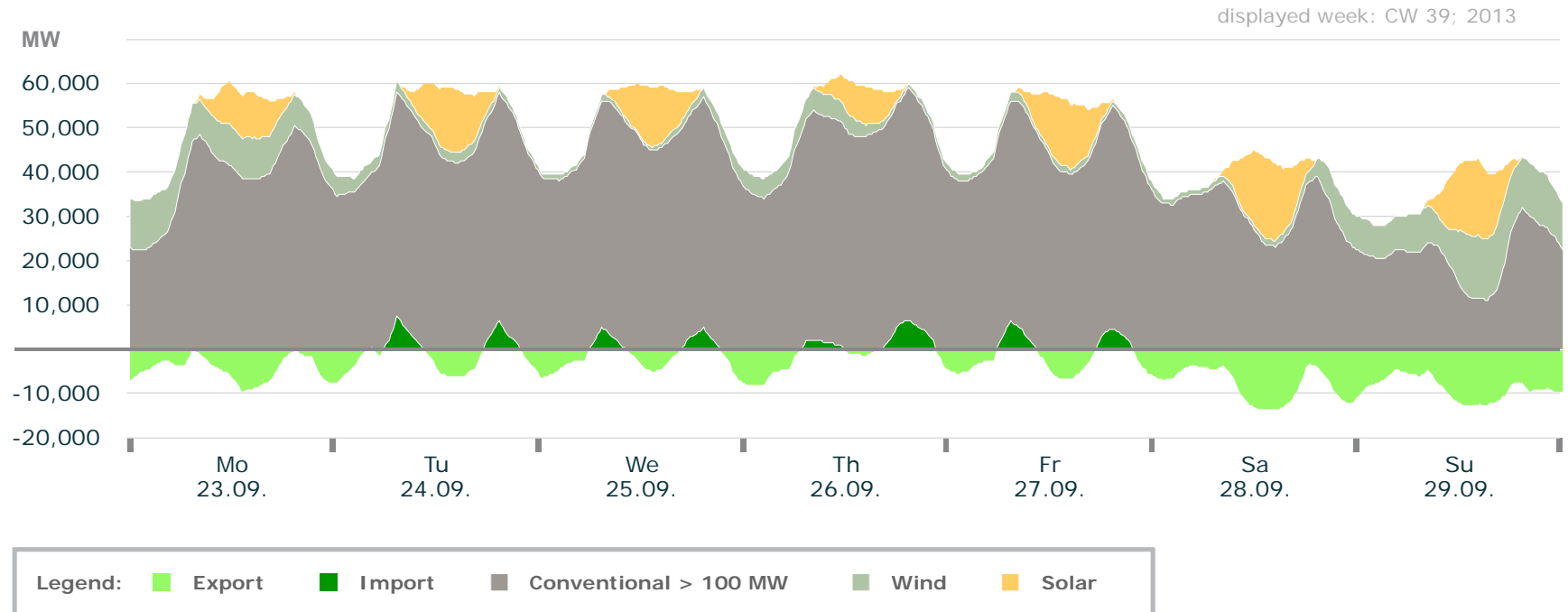
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 39

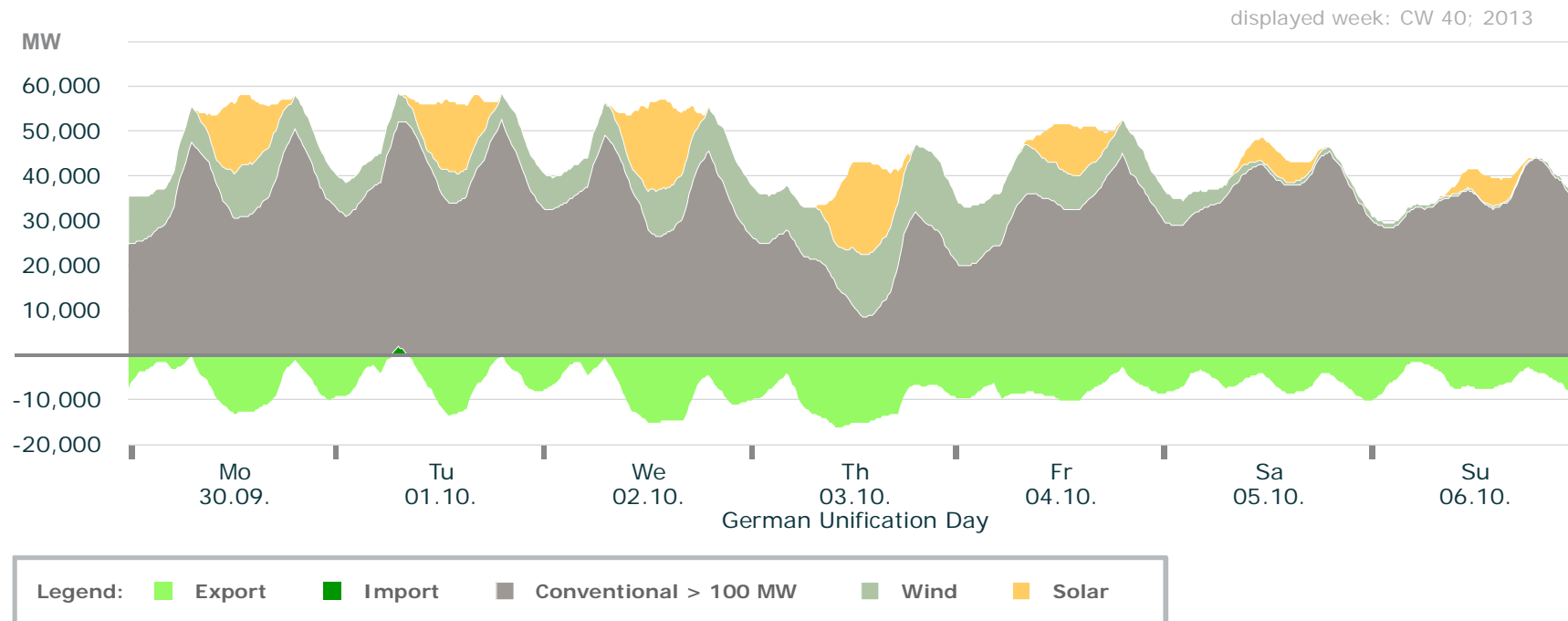
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 40

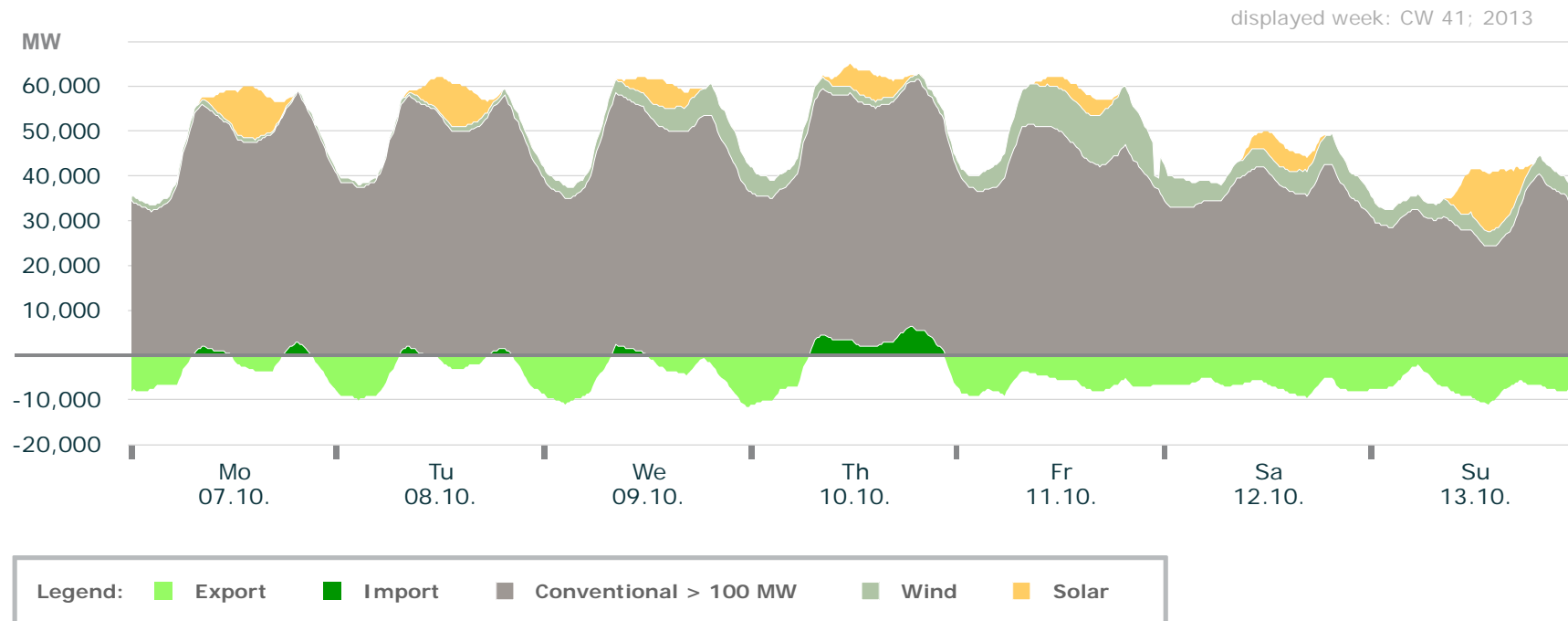
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 41

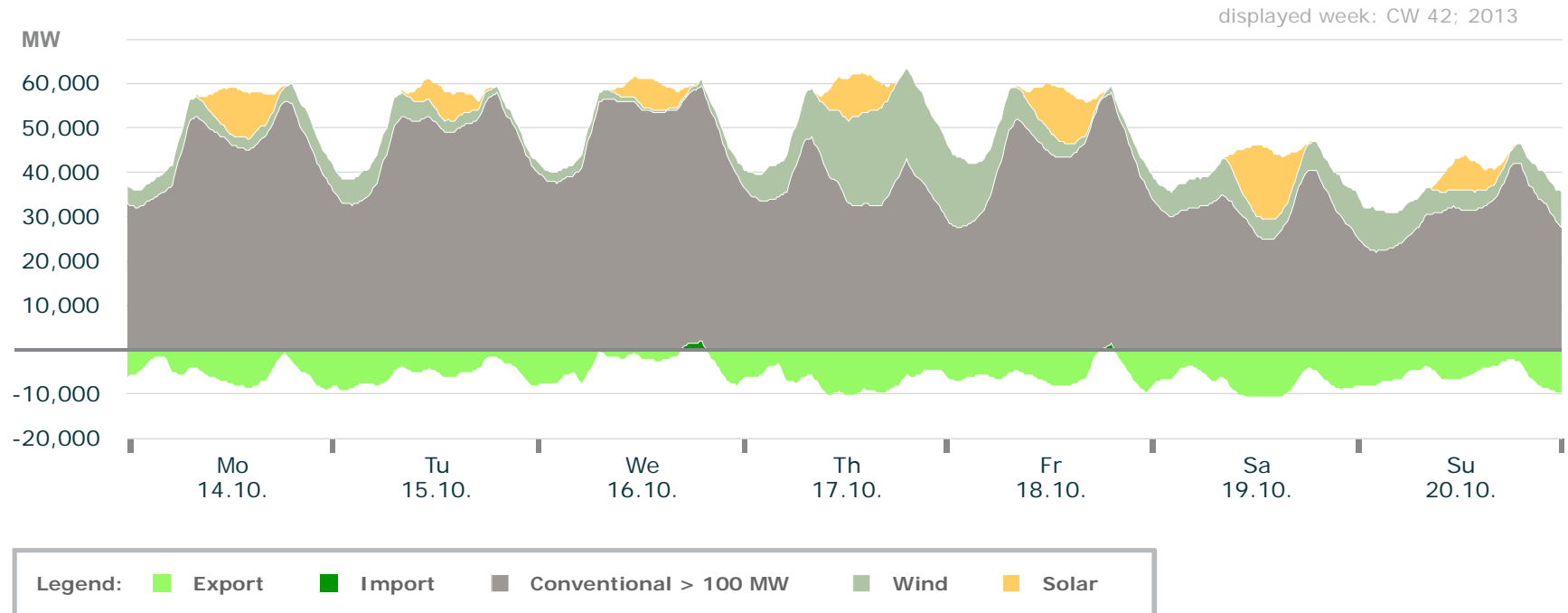
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 42

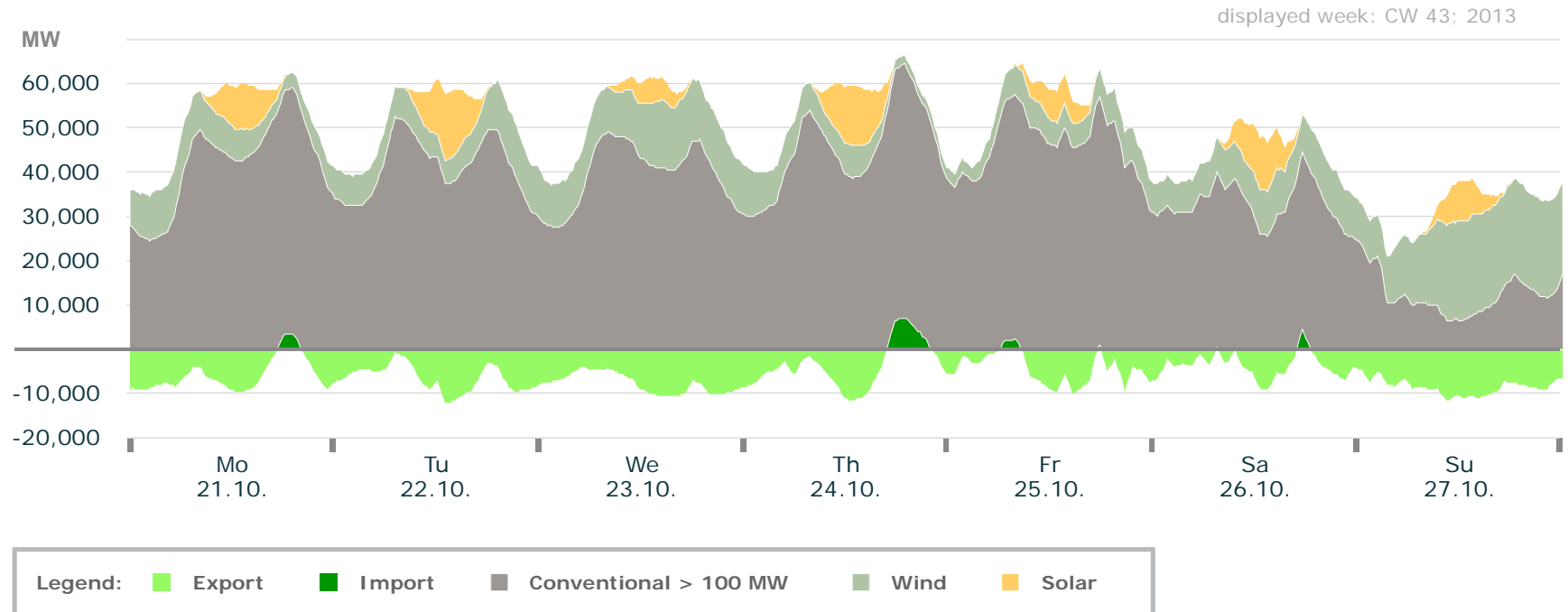
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 43

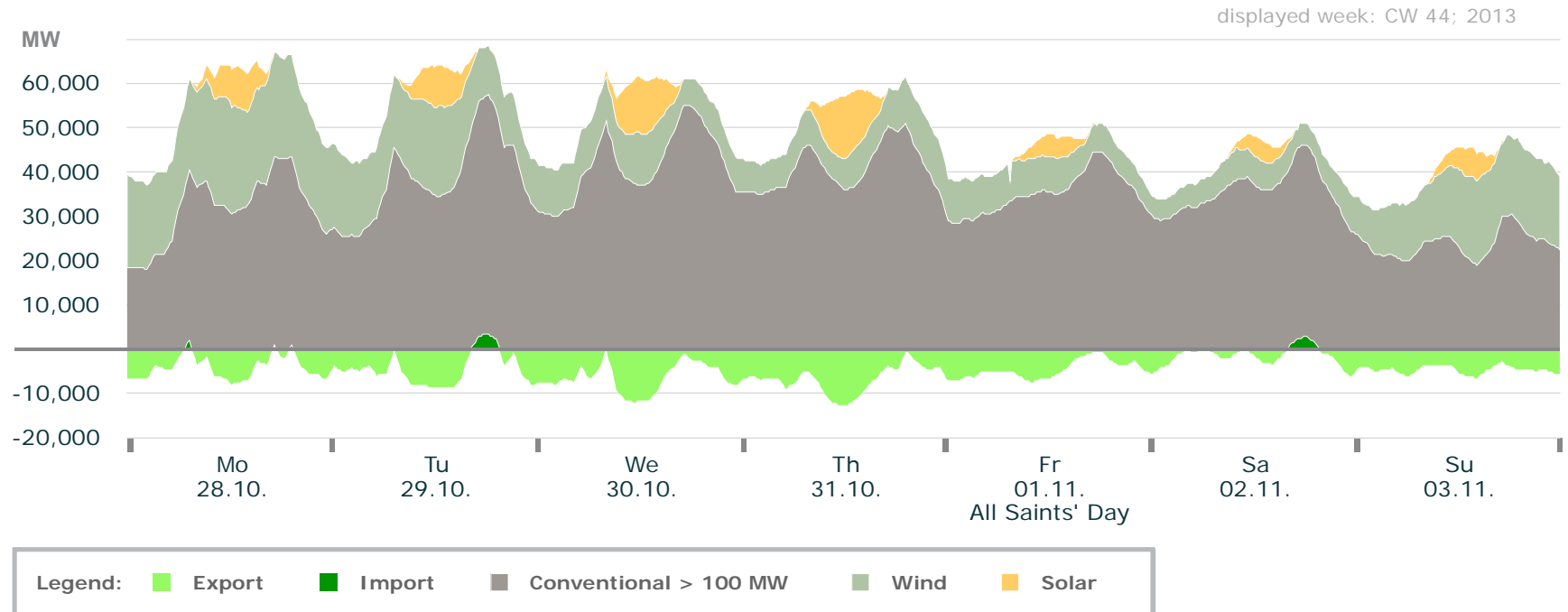
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 44

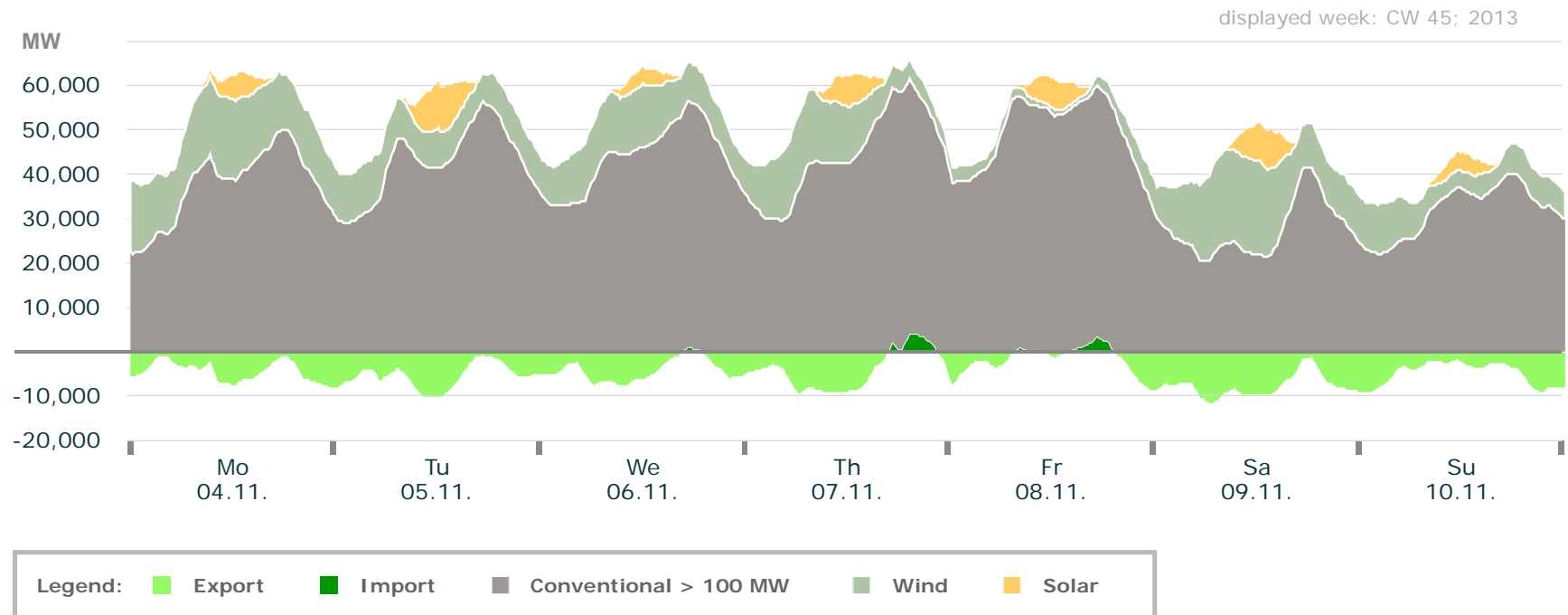
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 45

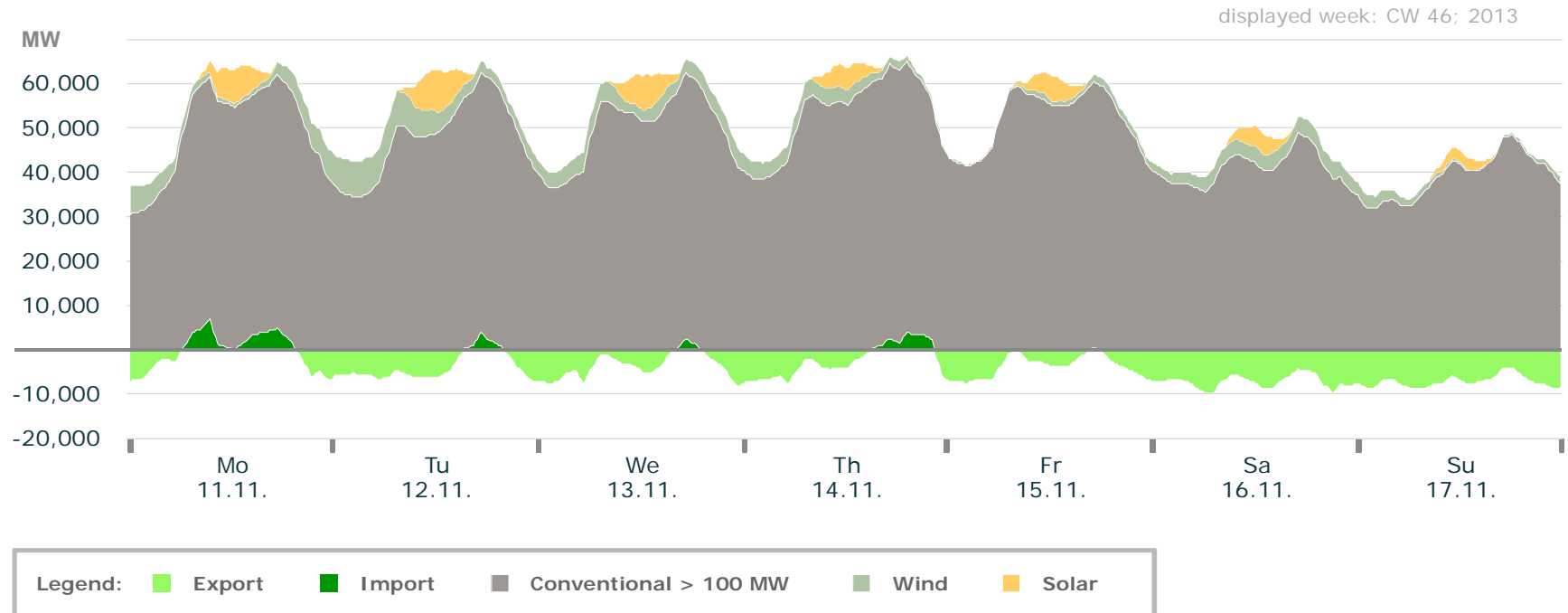
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 46

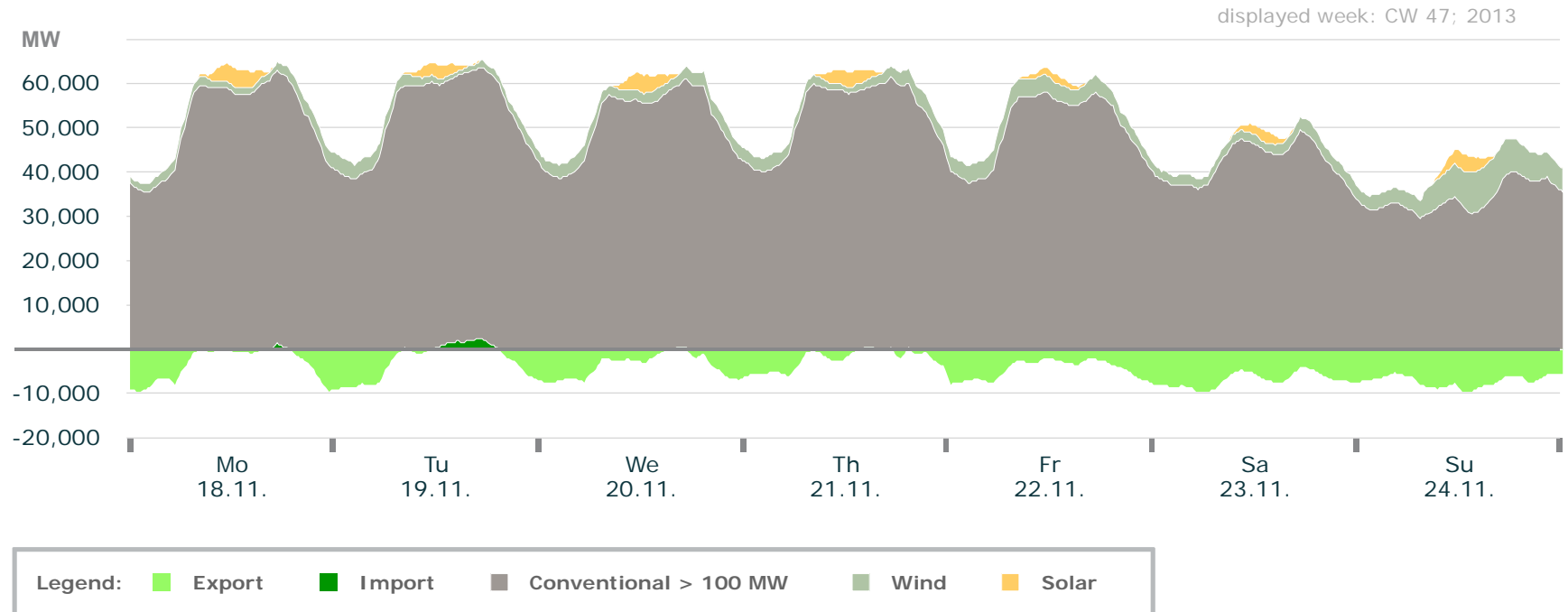
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 47

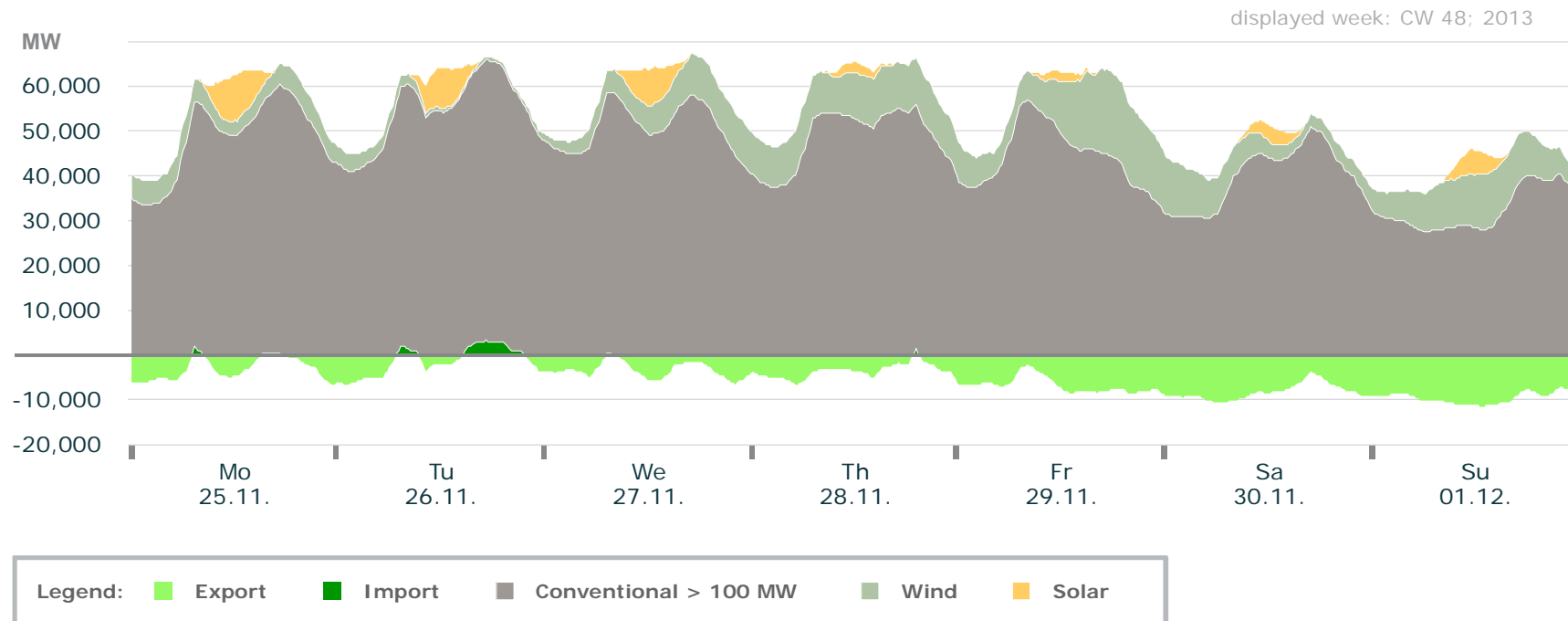
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 48

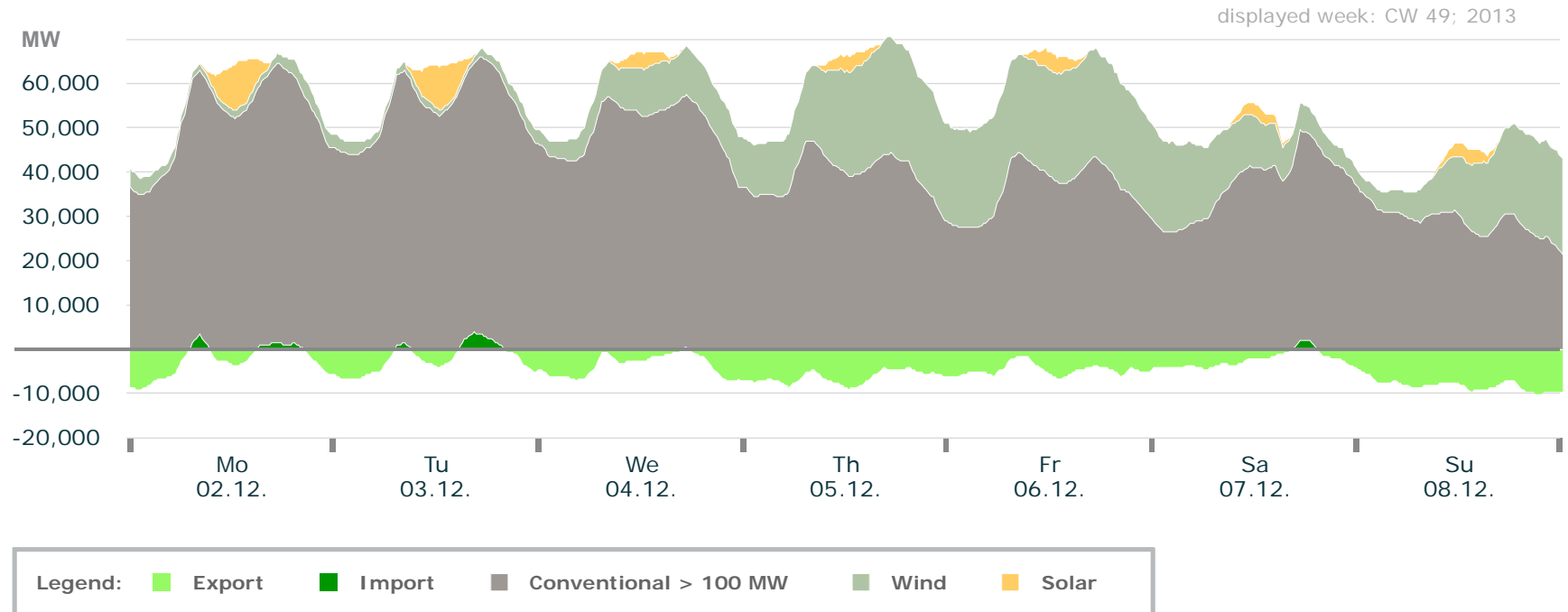
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 49

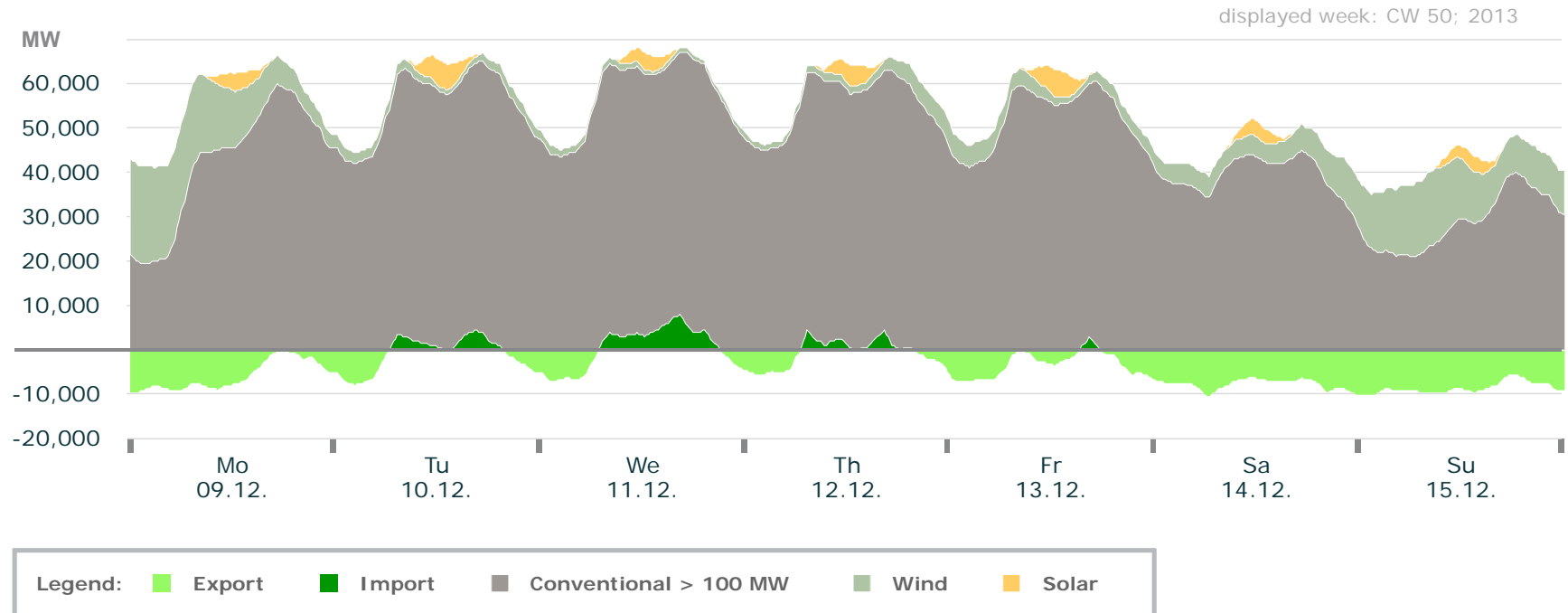
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 50

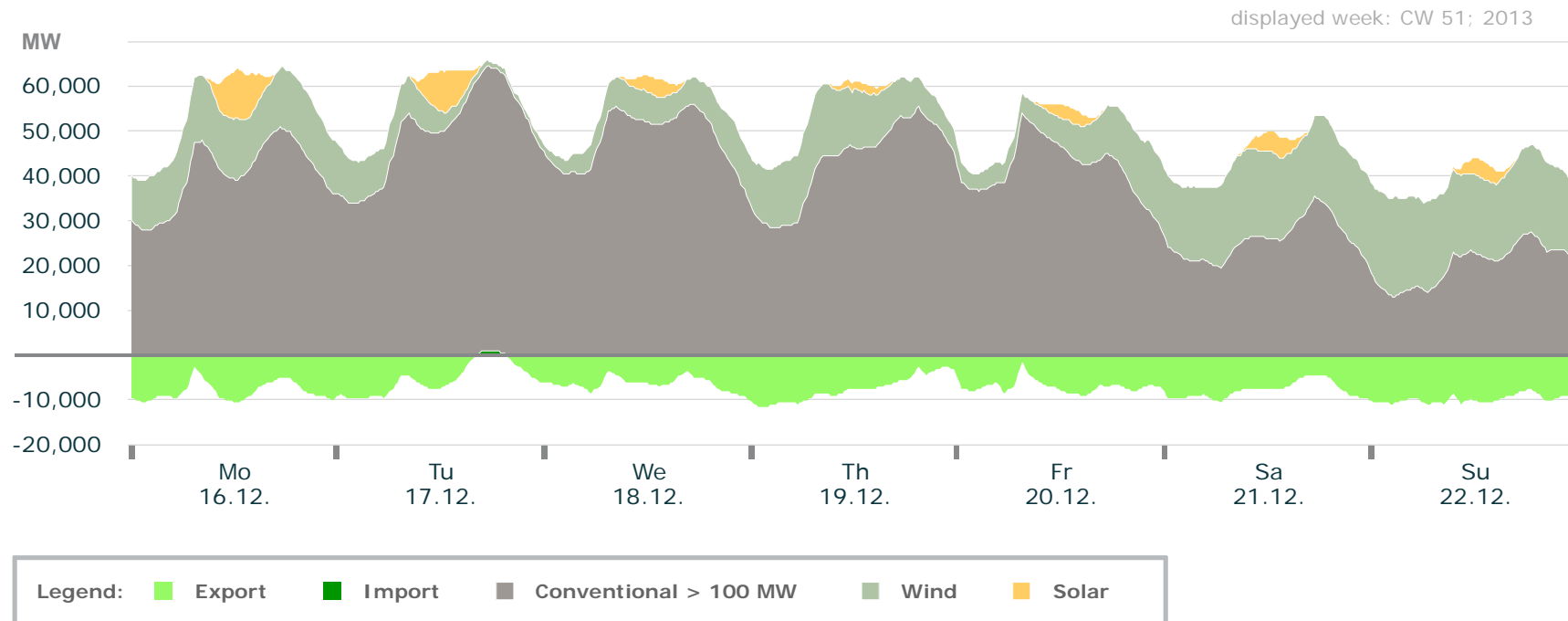
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 51

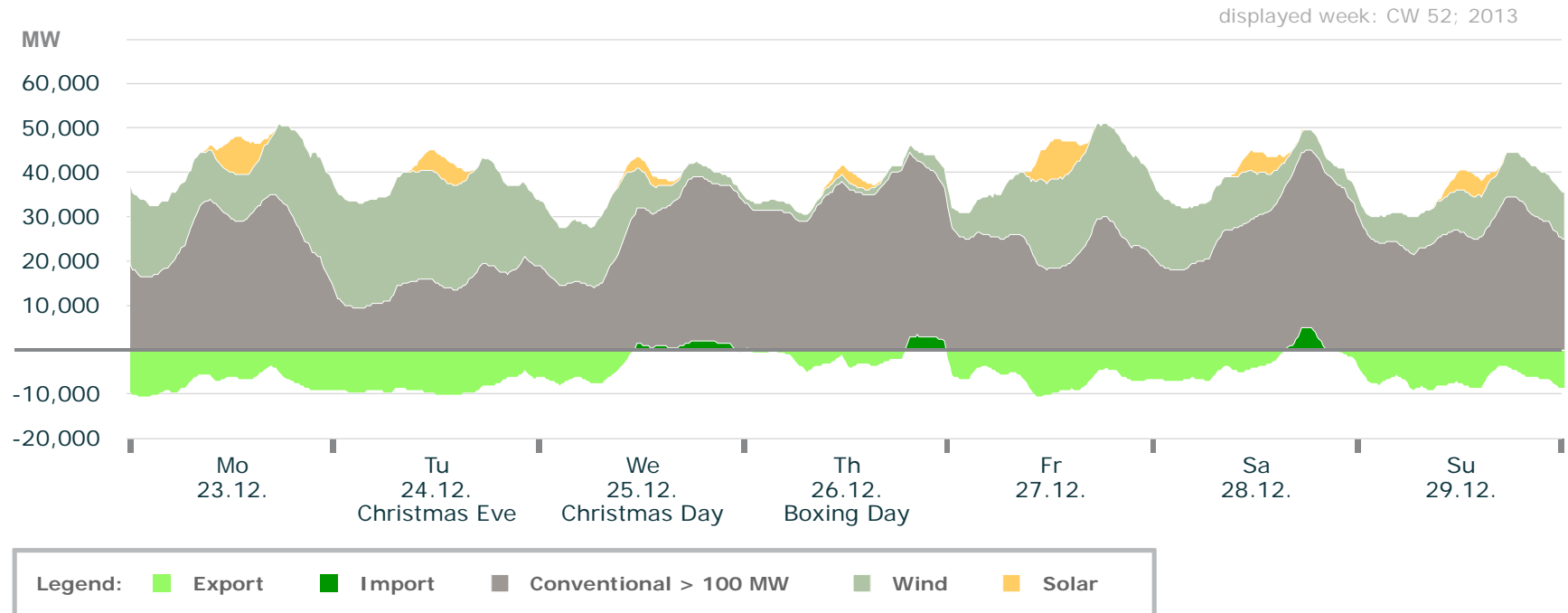
Actual production



Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 52

Actual production



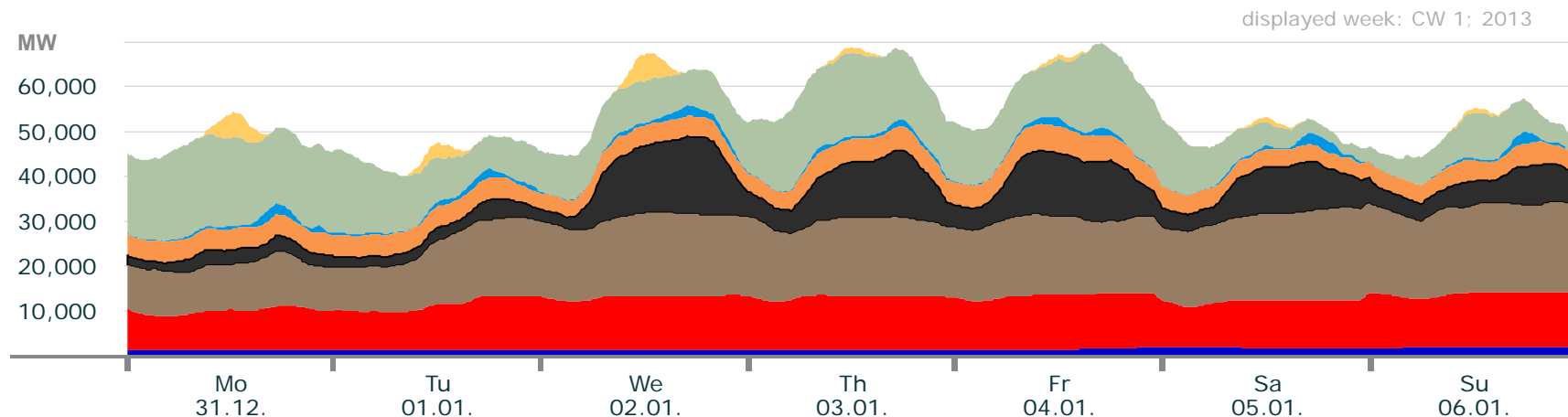
Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

AGENDA

- Annual energies
- Monthly energies
- Weekly energies
- Daily energies
- Annual power curves
- Monthly power curves
- **Weekly power curves**
 - Weekly power curves for conventional, wind and solar
 - Weekly power curves with import and export
 - Detailed weekly power curves
- Exemplary daily power curves

Electricity Production in Germany: Calendar Week 1

Actual production

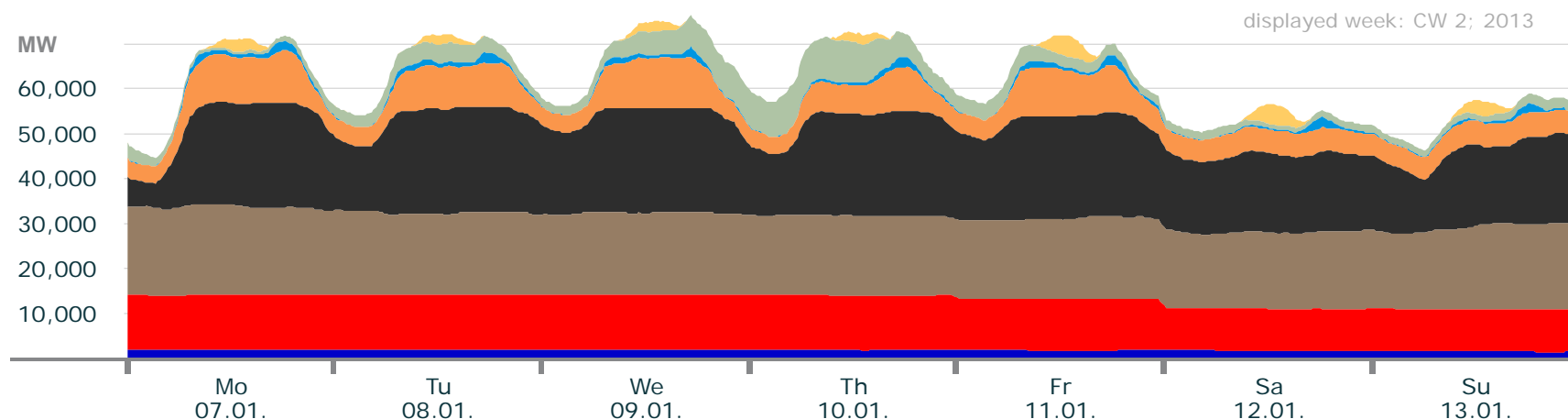


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.4	6.6	9.1	1.9	3.6	0	2.2	0
max. power (GW)	2.2	12.2	20.6	17.2	6.0	2.7	20.9	6.0
weekly energy (TWh)	0.25	1.9	2.7	1.2	0.70	0.13	2.0	0.09

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 2

Actual production



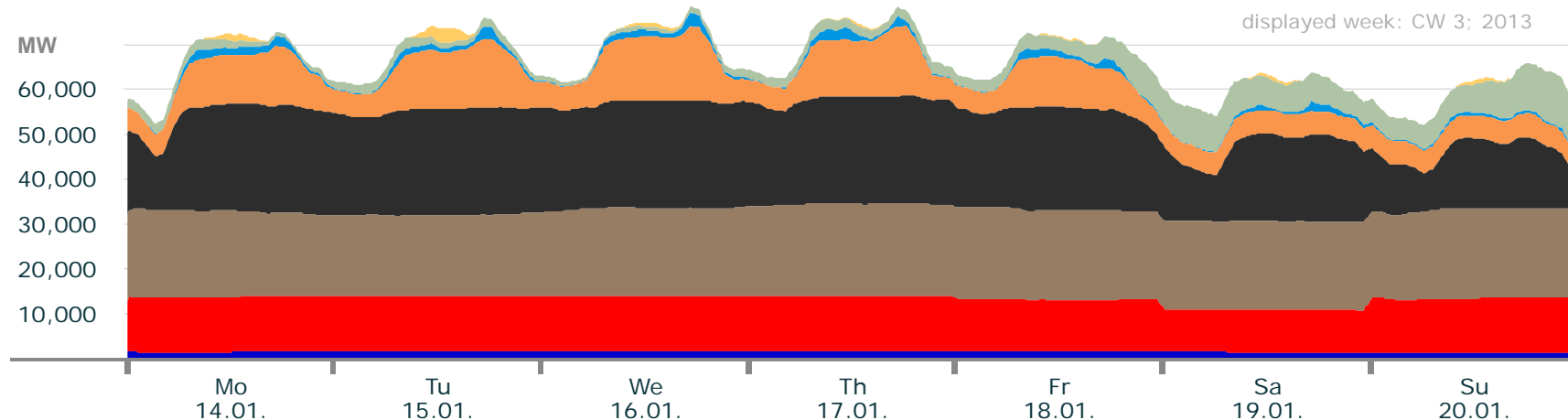
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.5	9.1	16.4	11.5	3.8	0	0.43	0
max. power (GW)	2.0	12.3	19.6	24.0	15.4	2.7	9.6	4.7
weekly energy (TWh)	0.3	1.9	3.0	3.4	1.2	0.12	1.6	0.1

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 3

Actual production



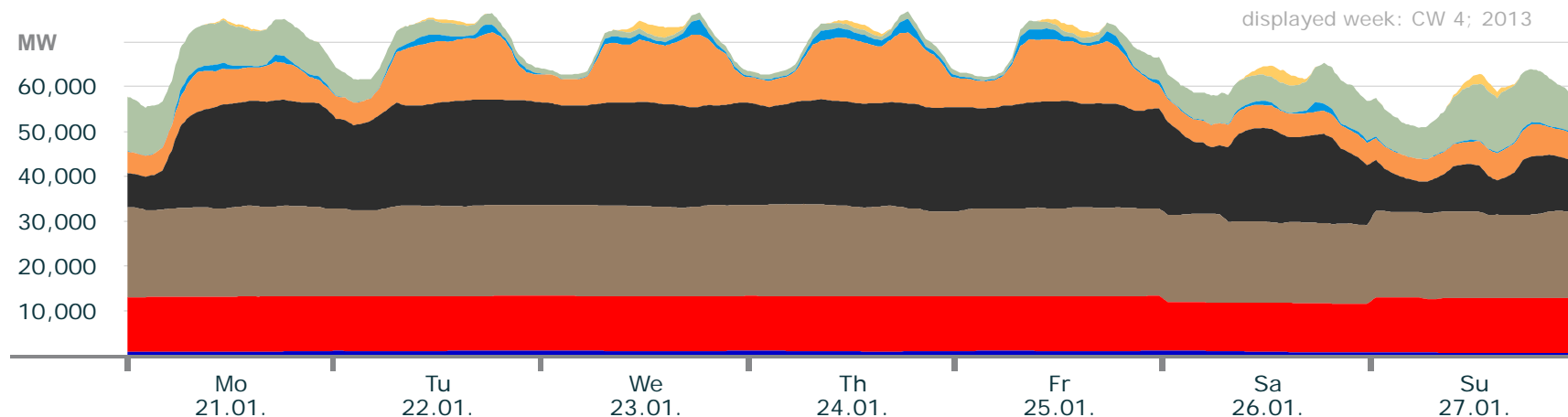
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.4	9.4	17.8	8.5	4.8	0	0.32	0
max. power (GW)	1.9	12.3	20.7	24.0	16.6	3.1	11.7	3.4
weekly energy (TWh)	0.29	2.0	3.3	3.4	1.4	0.14	0.57	0.04

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 4

Actual production

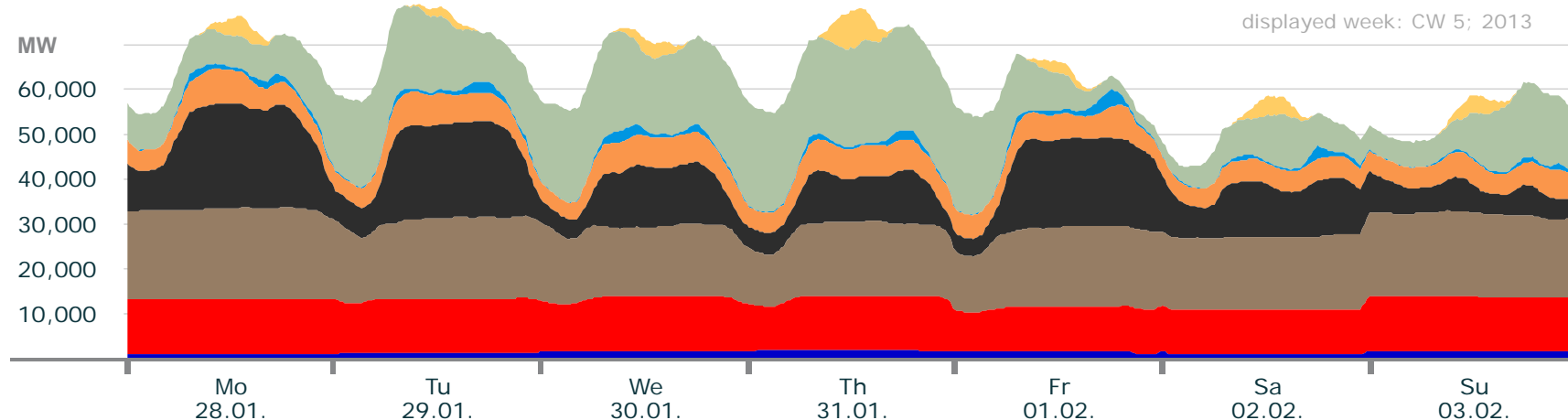


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.1	10.8	17.4	6.8	4.6	0	0.57	0
max. power (GW)	1.7	12.3	20.4	23.8	16.1	3.4	12.9	2.8
weekly energy (TWh)	0.25	2.0	3.3	3.3	1.4	0.13	0.77	0.06

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 5

Actual production



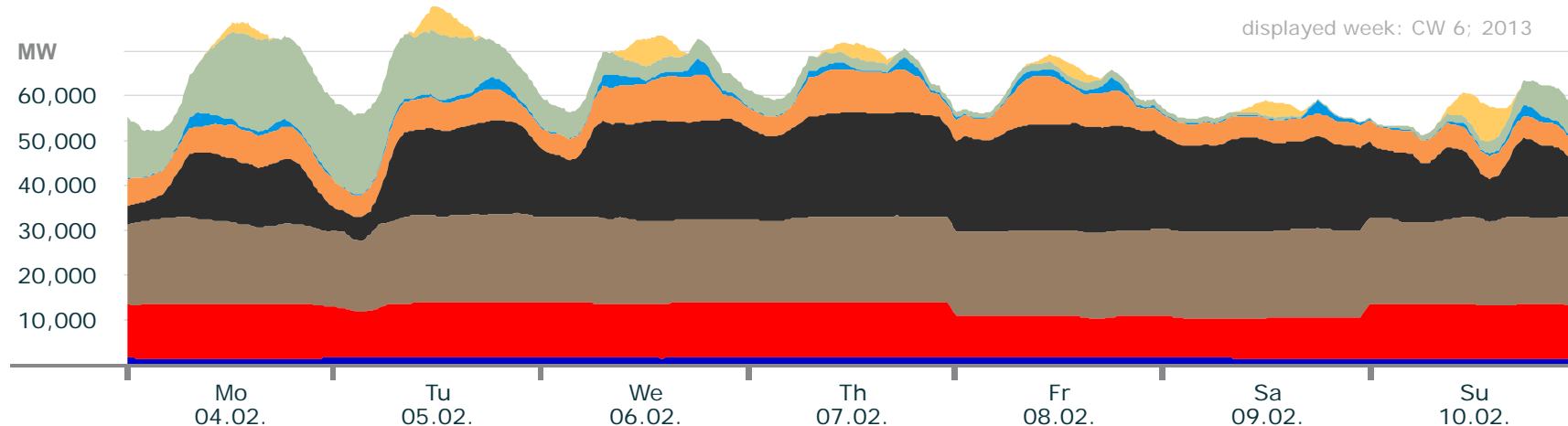
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.1	8.8	11.7	3.9	3.7	0	2.2	0
max. power (GW)	2.0	12.2	20.4	23.5	7.9	3.9	23.3	8.4
weekly energy (TWh)	0.27	1.9	2.8	2.0	0.93	0.14	2.3	0.14

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 6

Actual production



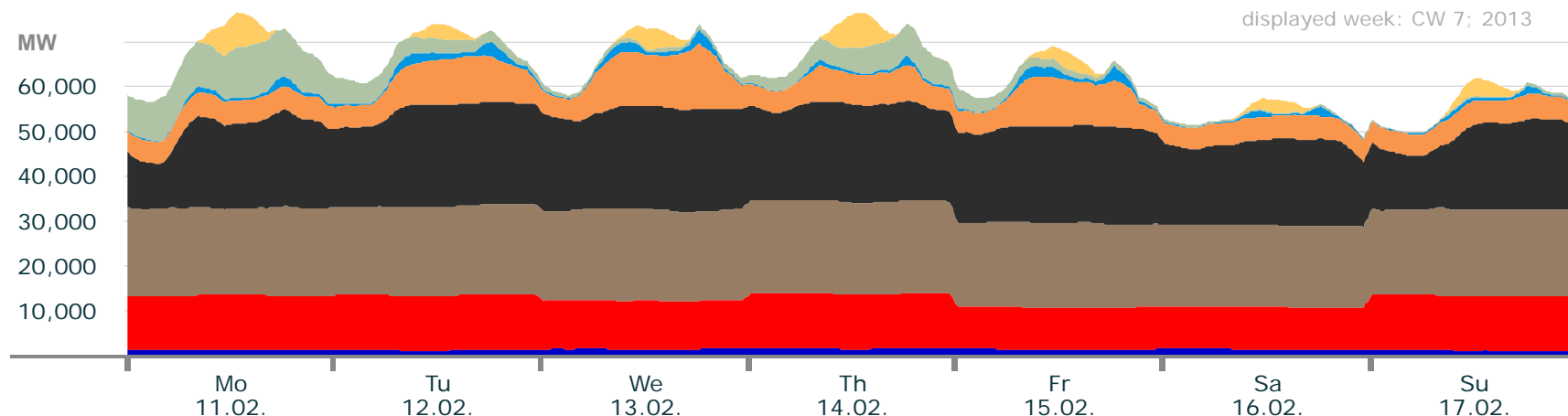
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.4	8.8	16.0	4.3	4.5	0	0.2	0
max. power (GW)	1.8	12.3	20.1	23.9	10.6	3.6	21.0	8.4
weekly energy (TWh)	0.28	1.9	3.2	3.0	1.1	0.14	0.95	0.16

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 7

Actual production

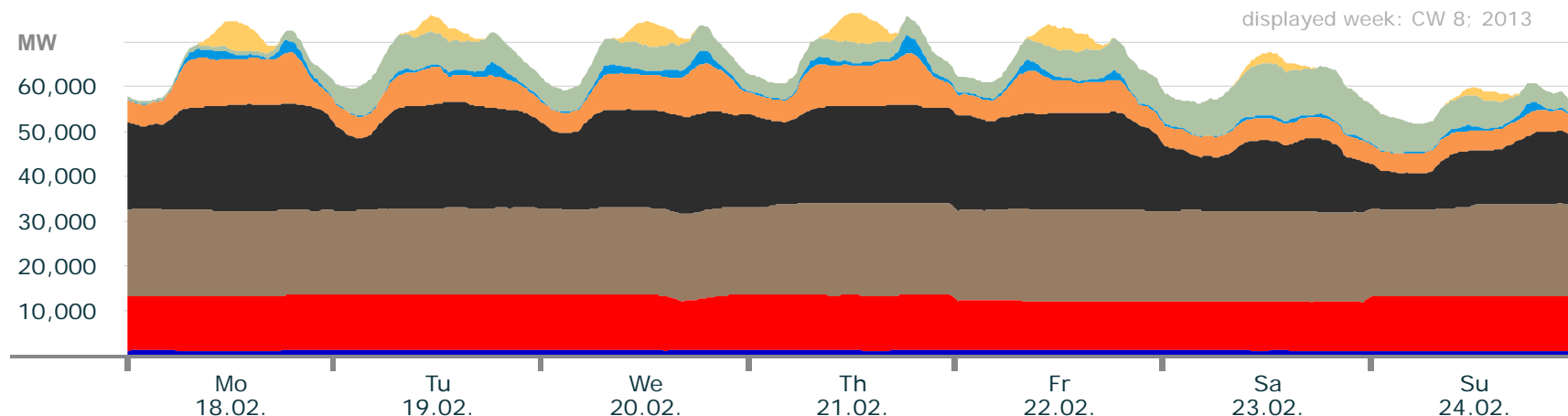


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.3	9.4	18.0	10.0	4.5	0	0.13	0
max. power (GW)	1.8	12.3	20.9	22.9	14.5	3.2	11.7	7.8
weekly energy (TWh)	0.26	1.9	3.3	3.3	1.1	0.14	0.49	0.18

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 8

Actual production



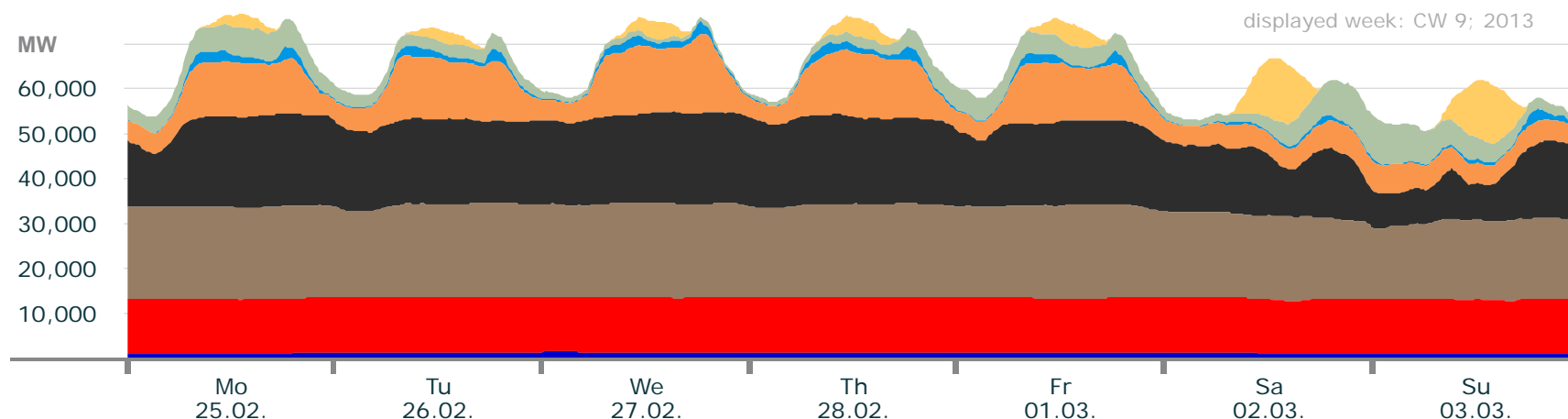
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.2	10.8	18.6	8.1	4.2	0	0.26	0
max. power (GW)	1.6	12.3	20.6	23.8	11.4	4.2	11.7	6.7
weekly energy (TWh)	0.24	2.0	3.3	3.2	1.1	0.14	0.88	0.17

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 9

Actual production

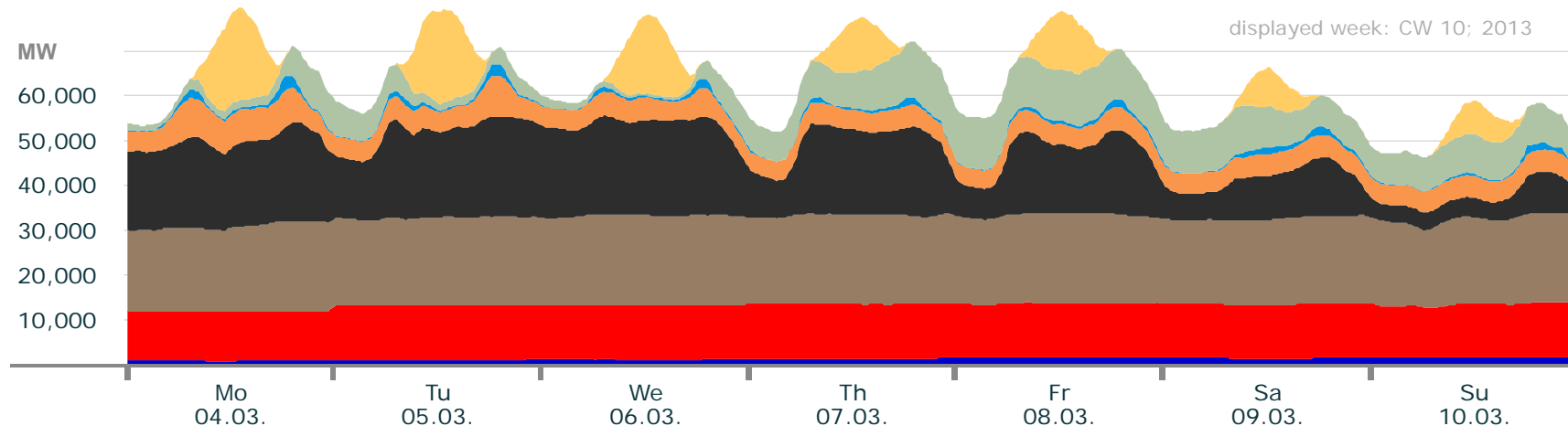


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.1	11.5	15.5	7.2	3.9	0	0.32	0
max. power (GW)	1.7	12.3	21.0	20.5	17.7	3.0	9.6	14.1
weekly energy (TWh)	0.23	2.1	3.3	2.8	1.4	0.16	0.56	0.27

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 10

Actual production

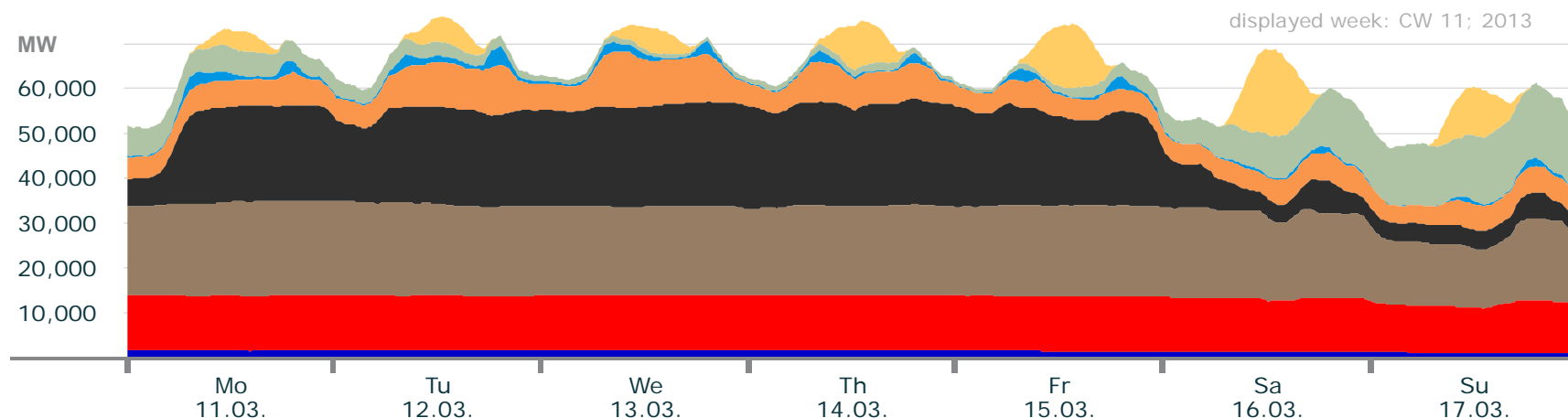


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.0	10.8	17.0	3.8	4.0	0	0.34	0
max. power (GW)	1.9	12.2	20.1	22.4	9.0	3.2	12.6	20.7
weekly energy (TWh)	0.26	2.0	3.3	2.5	0.84	0.11	1.1	0.63

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 11

Actual production

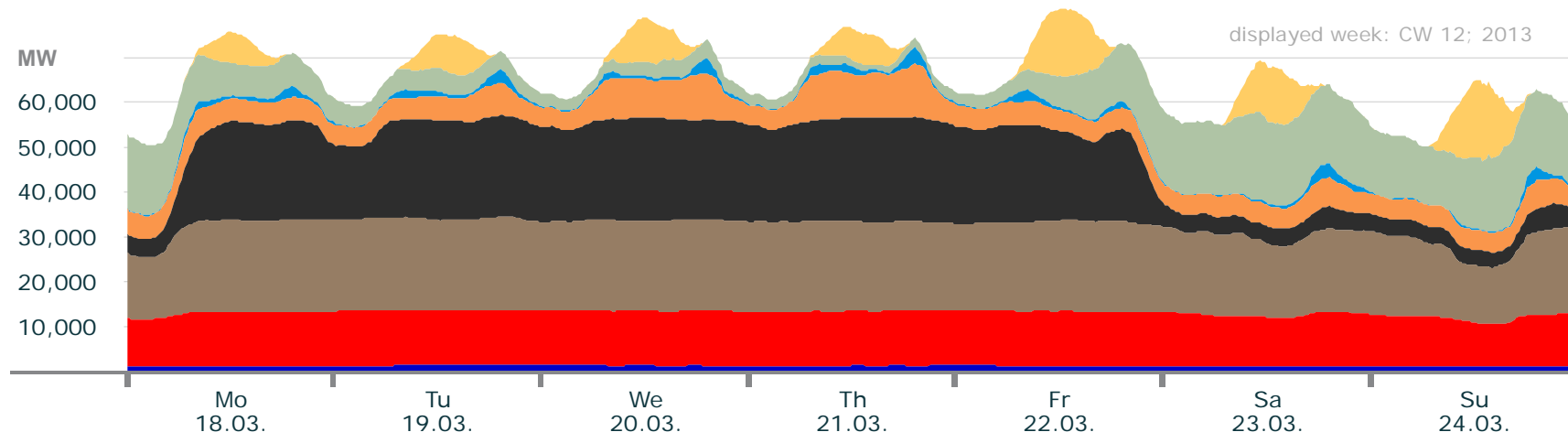


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.2	9.9	13.0	3.9	3.9	0	0.48	0
max. power (GW)	1.9	12.2	21.2	23.5	12.6	4.1	17.0	19.3
weekly energy (TWh)	0.27	2.0	3.2	2.7	1.1	0.15	0.84	0.45

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 12

Actual production



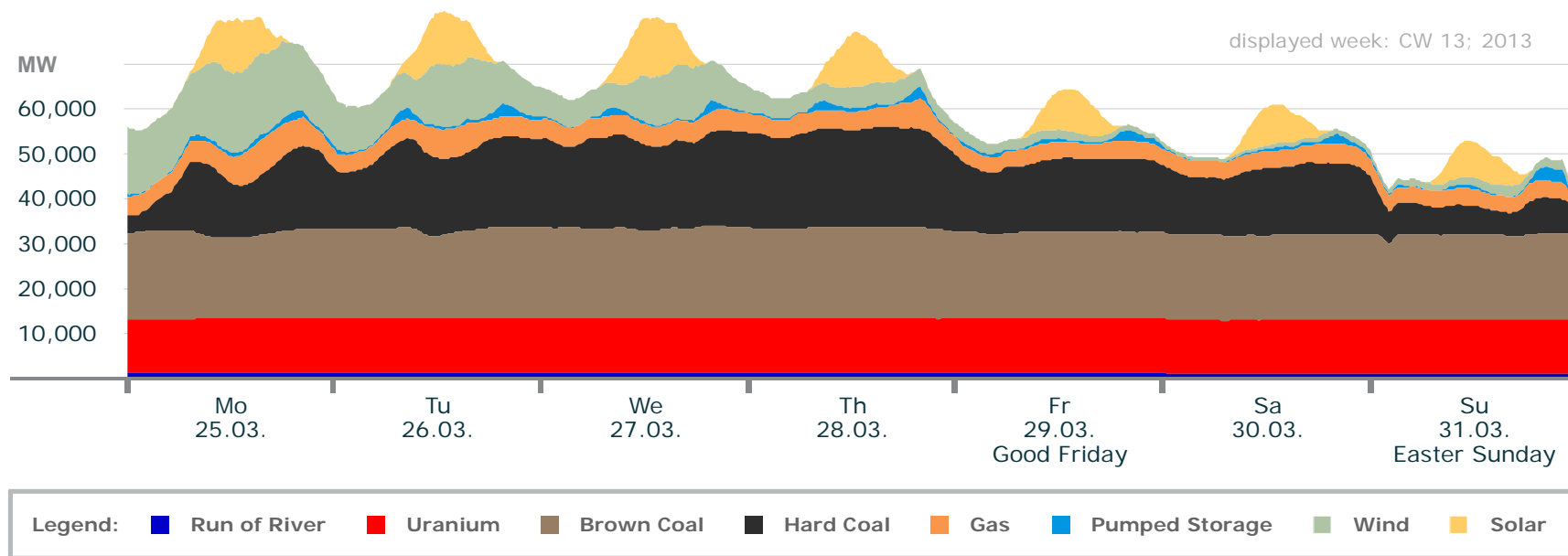
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.2	9.4	12.6	3.2	4.0	0	0.79	0
max. power (GW)	1.6	12.2	20.9	23.2	11.9	3.7	19.5	17.3
weekly energy (TWh)	0.24	2.0	3.2	2.6	0.98	0.14	1.4	0.51

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 13

Actual production

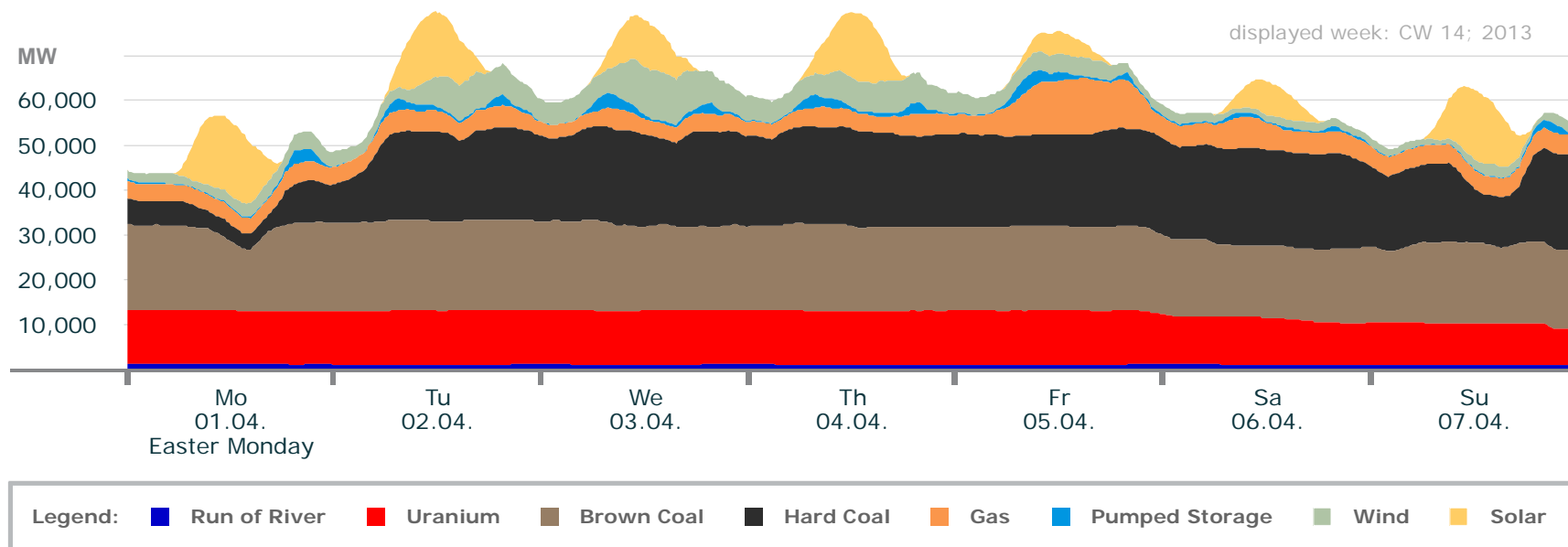


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.2	11.9	16.8	3.9	2.6	0	0.56	0
max. power (GW)	1.5	12.2	20.5	22.2	8.0	3.1	18.0	13.2
weekly energy (TWh)	0.22	2.0	3.3	2.6	0.75	0.13	0.99	0.51

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 14

Actual production

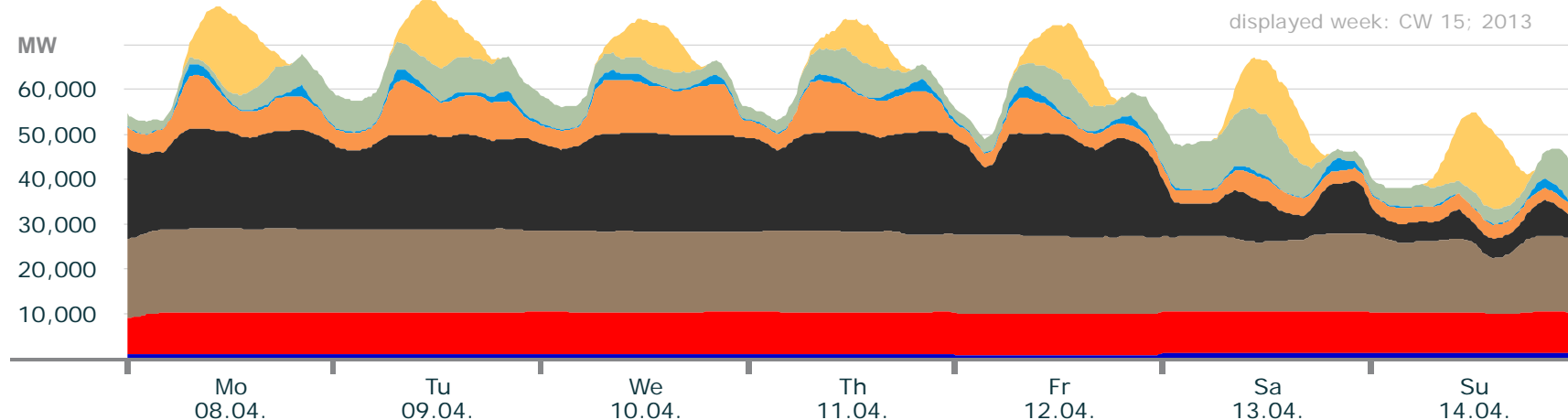


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.1	8.0	13.7	3.5	2.6	0	0.84	0
max. power (GW)	1.5	12.1	20.2	21.9	12.6	3.4	10.6	16.7
weekly energy (TWh)	0.22	1.9	3.1	2.9	0.81	0.15	0.65	0.62

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 15

Actual production



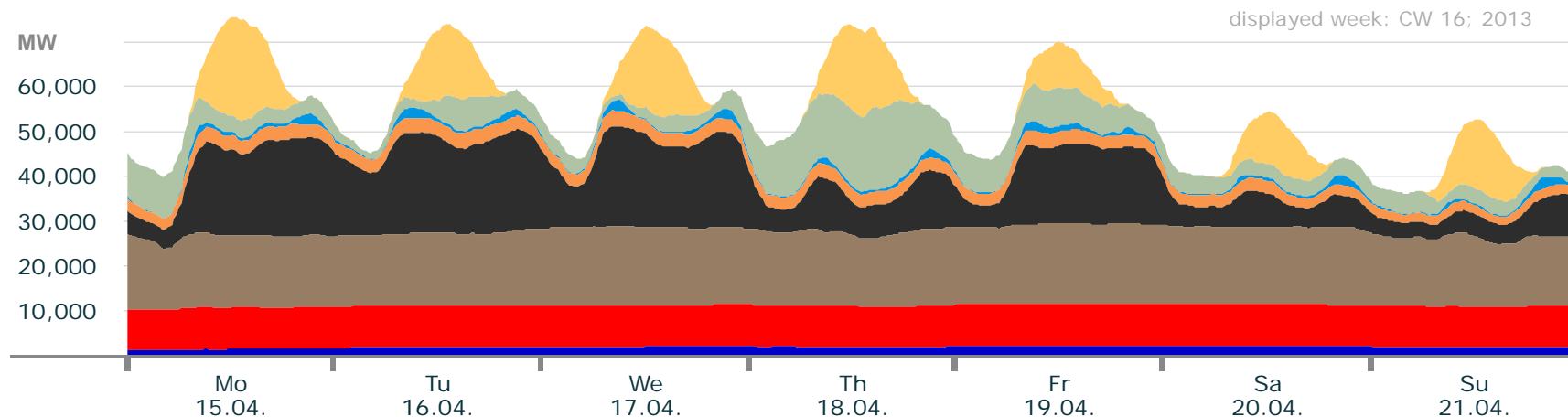
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	0.81	8.1	12.3	4.2	2.6	0	1.0	0
max. power (GW)	1.6	9.5	18.7	22.9	12.2	3.0	13.7	18.1
weekly energy (TWh)	0.21	1.6	2.9	2.8	1.0	0.14	0.89	0.68

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 16

Actual production



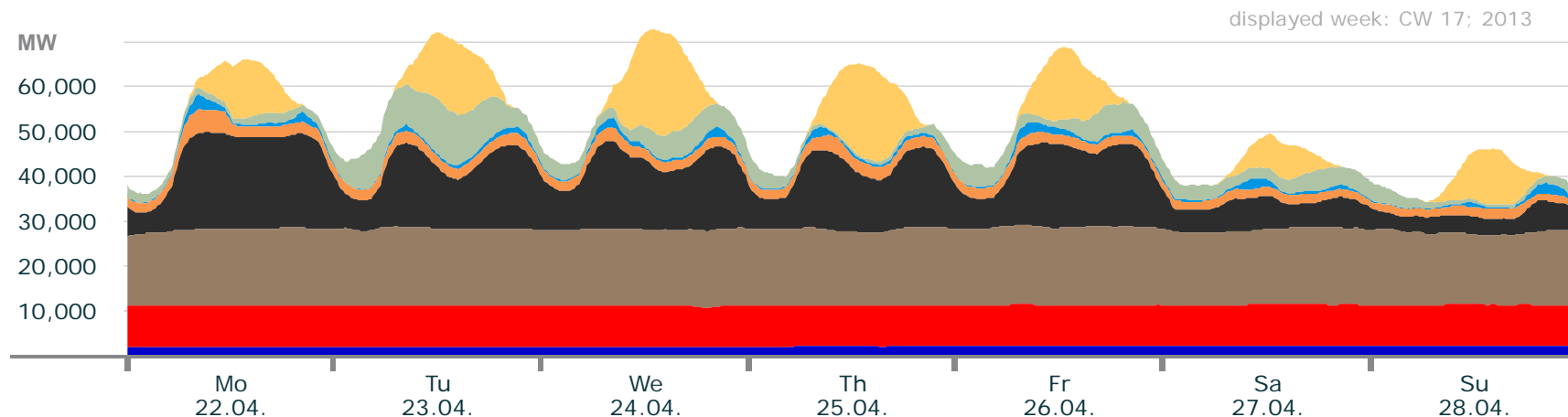
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.4	8.9	13.5	3.4	1.8	0	1.1	0
max. power (GW)	2.4	9.3	18.0	22.6	3.5	2.7	18.3	22.7
weekly energy (TWh)	0.36	1.5	2.8	2.1	0.46	0.13	0.95	0.86

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 17

Actual production



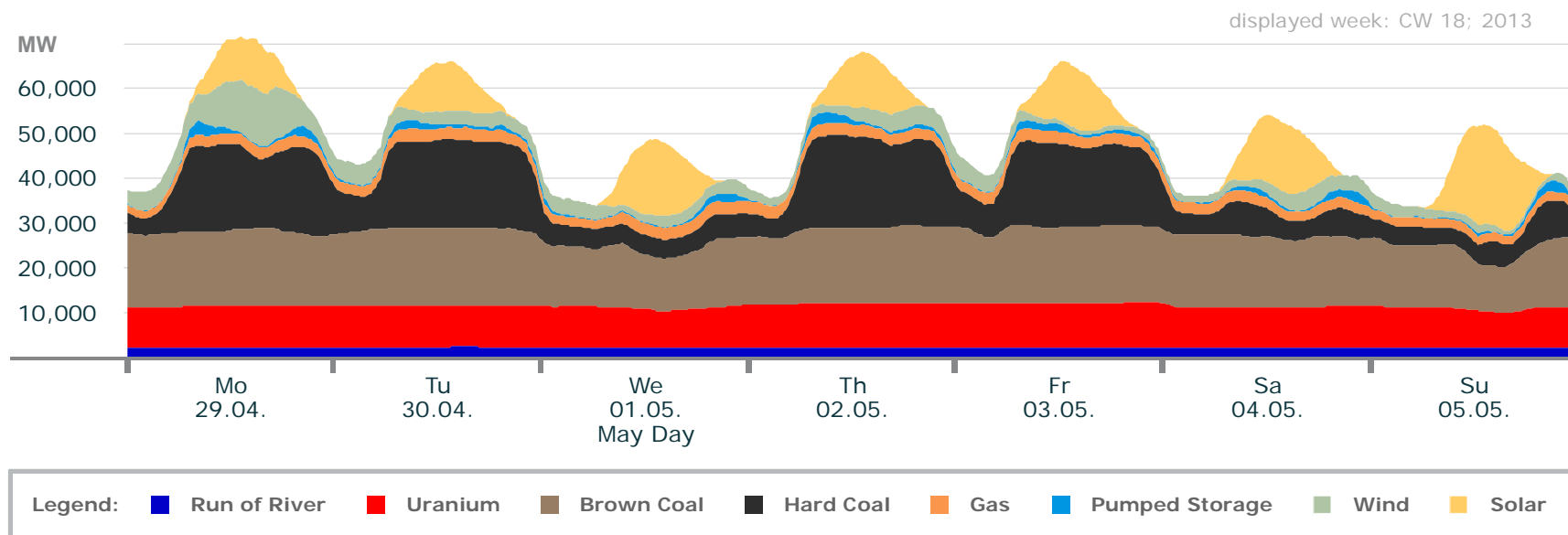
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	2.1	8.6	15.3	3.4	1.6	0	0.2	0
max. power (GW)	2.4	9.3	17.8	21.5	5.3	3.4	12.3	23.1
weekly energy (TWh)	0.38	1.5	2.8	2.0	0.40	0.13	0.59	0.84

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 18

Actual production

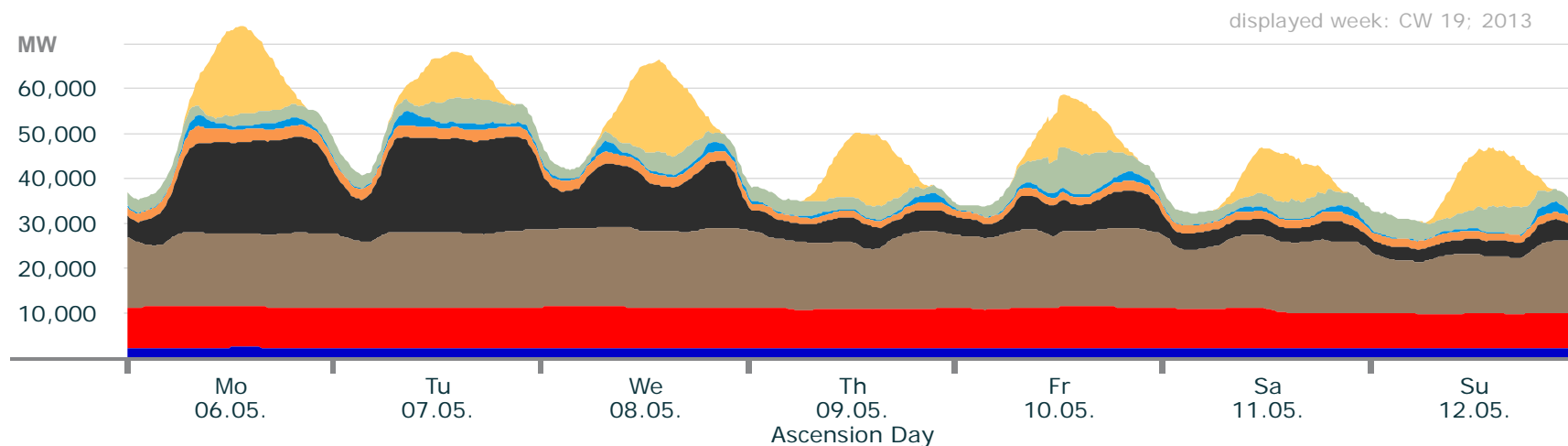


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	2.3	7.9	10.1	3.4	1.6	0	0.59	0
max. power (GW)	2.6	10.2	17.5	20.6	3.1	3.2	12.3	22.1
weekly energy (TWh)	0.40	1.6	2.6	1.9	0.40	0.13	0.52	0.83

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 19

Actual production

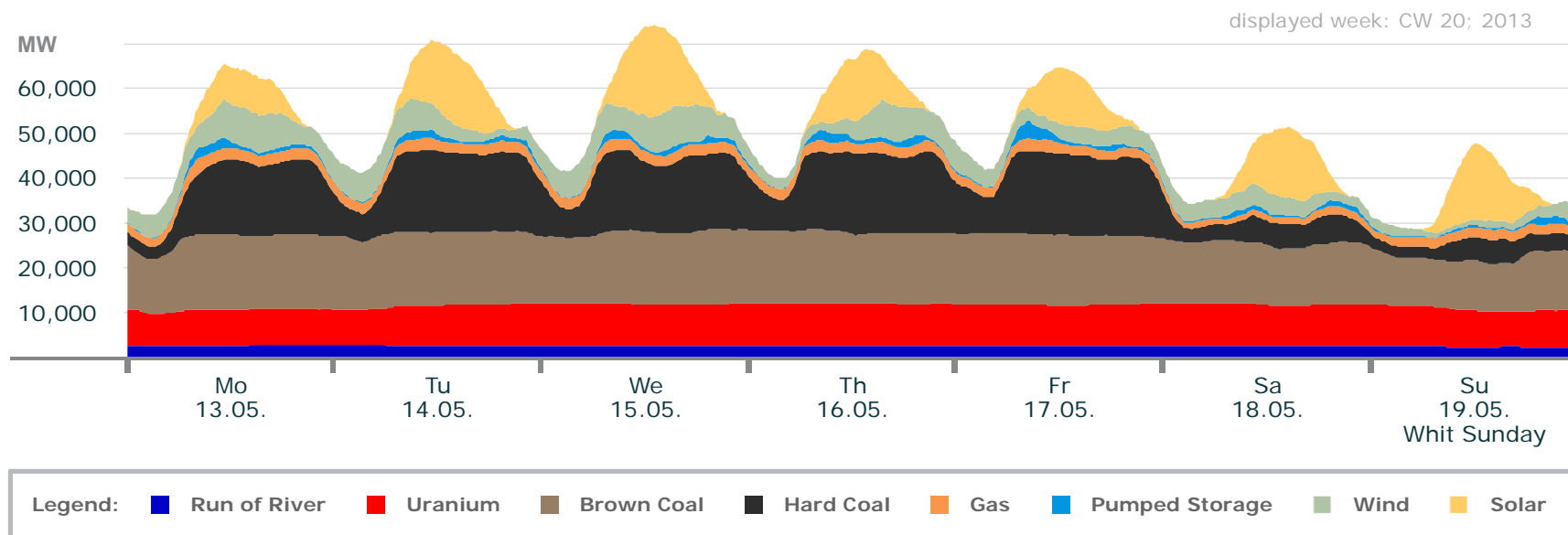


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	2.3	7.4	11.5	2.8	1.3	0	0.70	0
max. power (GW)	2.6	9.2	17.7	21.3	3.8	3.3	9.4	20.3
weekly energy (TWh)	0.41	1.5	2.7	1.5	0.34	0.13	0.56	0.84

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 20

Actual production

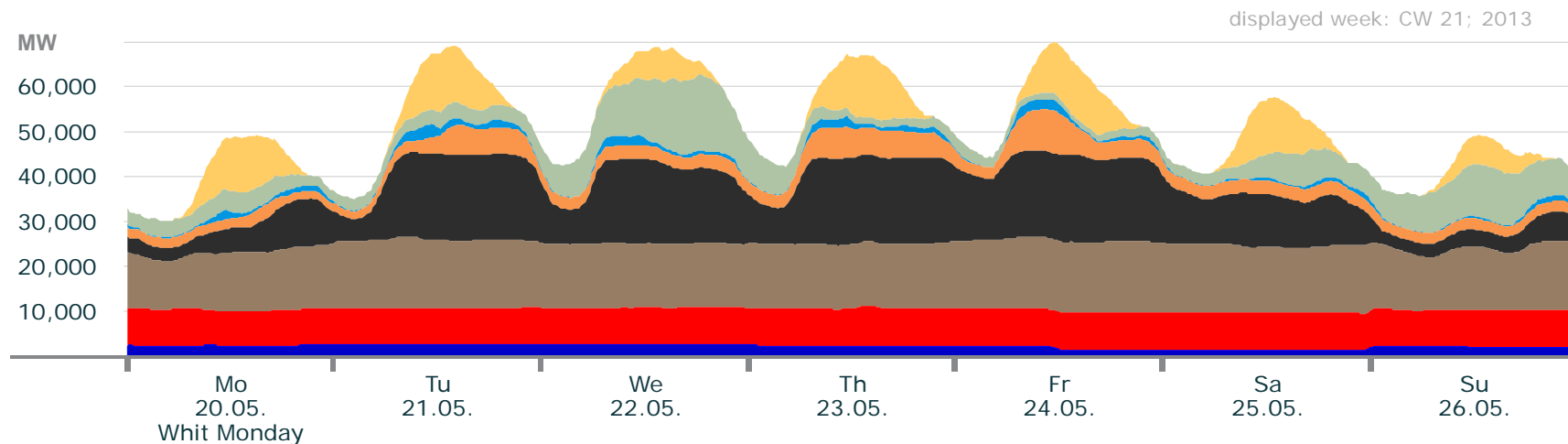


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	2.5	6.9	10.3	2.4	1.1	0	0.7	0
max. power (GW)	2.9	9.2	16.6	18.5	3.5	3.9	8.7	20.4
weekly energy (TWh)	0.5	1.5	2.5	1.9	0.4	0.1	0.7	0.9

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 21

Actual production

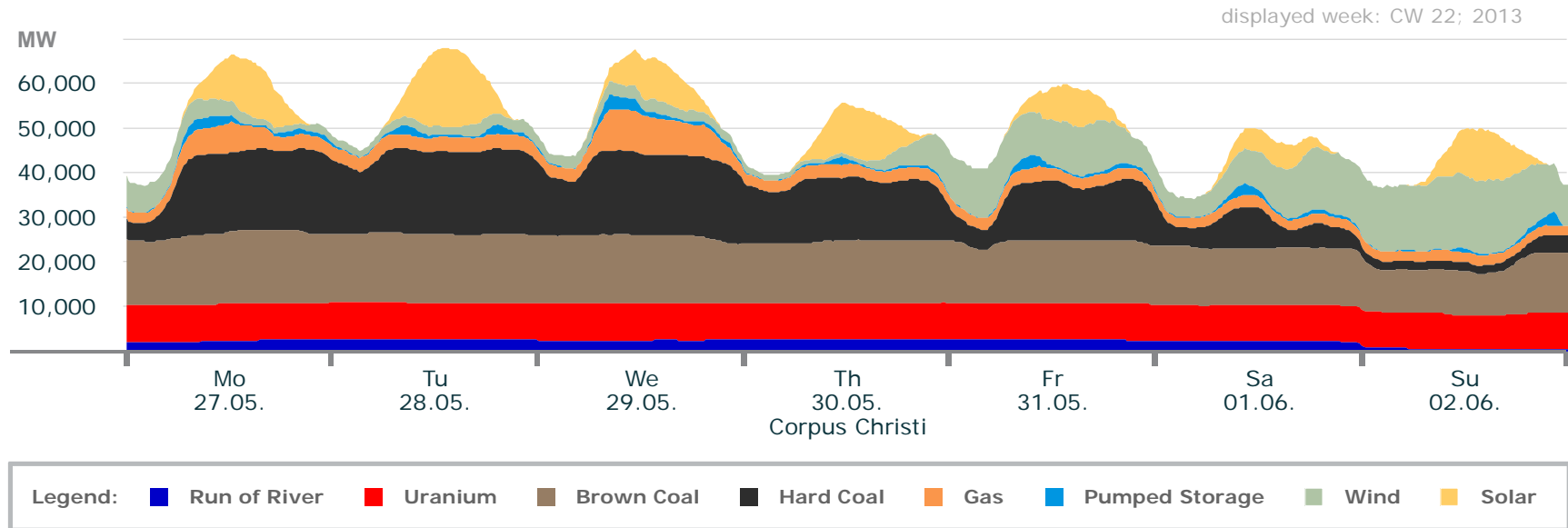


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.5	7.4	10.7	2.8	1.7	0	0.5	0
max. power (GW)	2.7	8.7	15.9	19.4	9.6	2.9	16.8	13.8
weekly energy (TWh)	0.4	1.4	2.4	2.0	0.6	0.1	0.8	0.7

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 22

Actual production

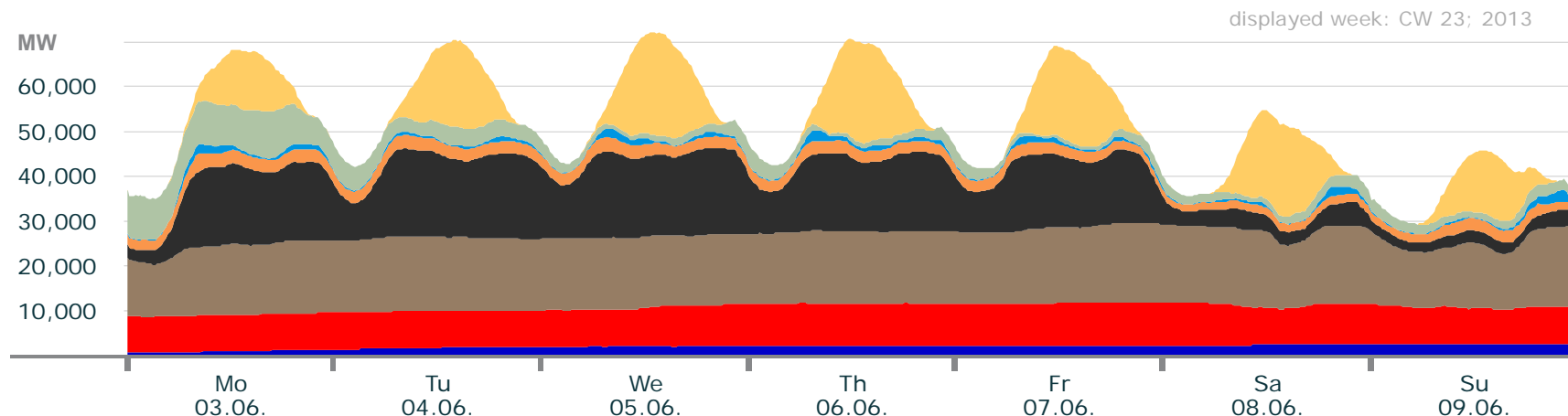


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	0.6	7.1	9.3	1.8	2.1	0	0.5	0
max. power (GW)	2.7	8.1	16.5	19.1	9.3	3.3	16.8	17.7
weekly energy (TWh)	0.4	1.4	2.3	1.9	0.6	0.1	1	0.7

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 23

Actual production

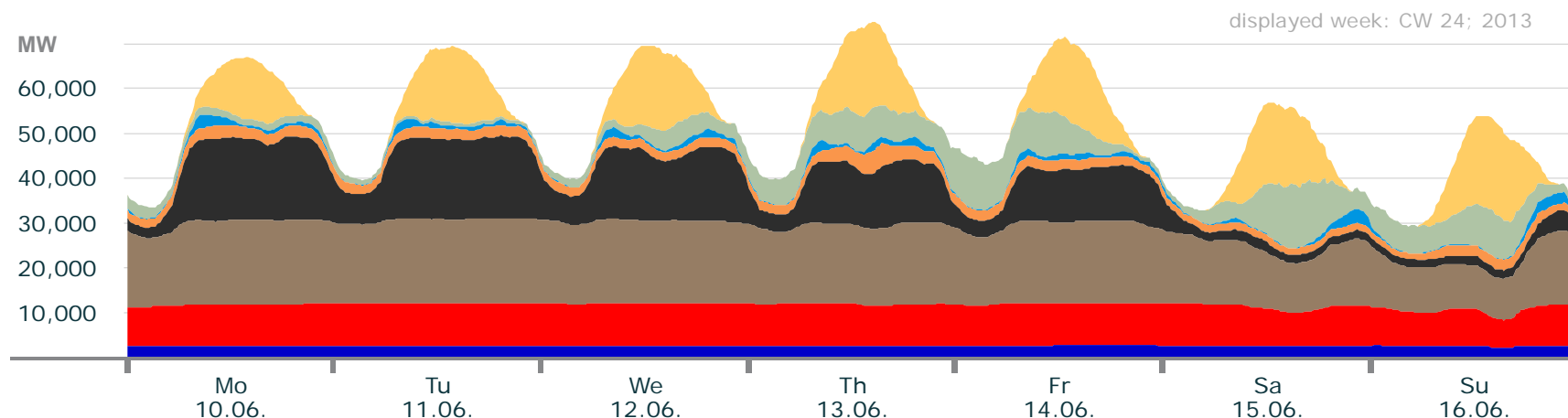


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	0.9	7.7	11.6	2.2	1.4	0	0.2	0
max. power (GW)	2.7	9.3	18.0	19.6	4.1	2.7	10.4	22.9
weekly energy (TWh)	0.4	1.5	2.7	2.0	0.4	0.1	0.5	1.2

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 24

Actual production



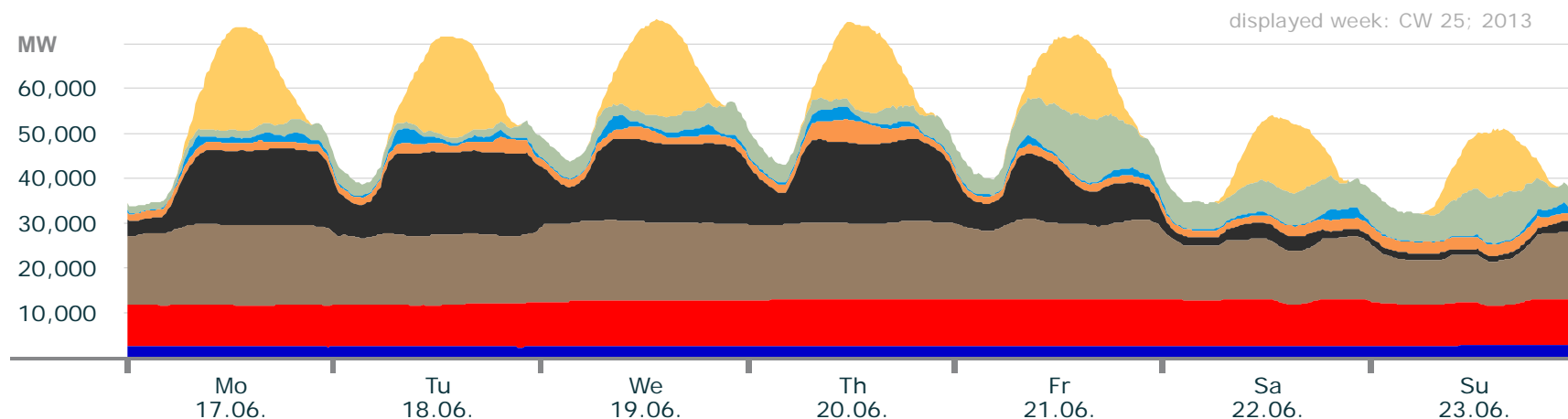
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	2.5	5.9	9.1	1.8	1.2	0	0.3	0
max. power (GW)	2.9	9.3	19.0	18.6	5.3	3.2	14.2	20.6
weekly energy (TWh)	0.5	1.5	2.8	1.6	0.4	0.1	0.7	1.1

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 25

Actual production

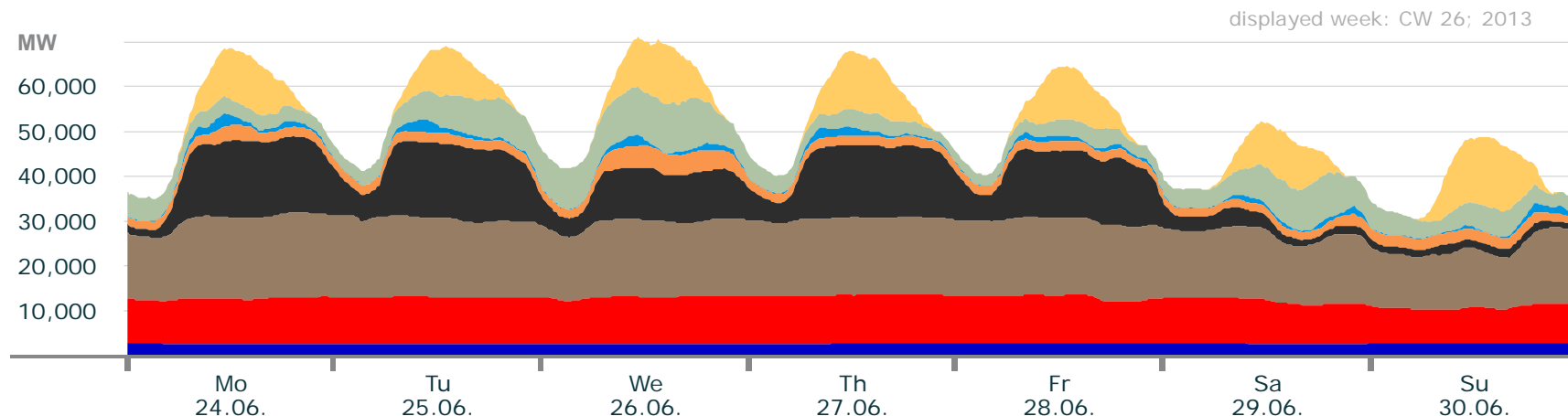


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	2.5	8.6	9.8	1.2	1.4	0	0.4	0
max. power (GW)	2.9	10.5	17.9	18.6	5.1	3.3	14.4	23.2
weekly energy (TWh)	0.5	1.7	2.6	1.7	0.4	0.2	0.8	1.1

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 26

Actual production



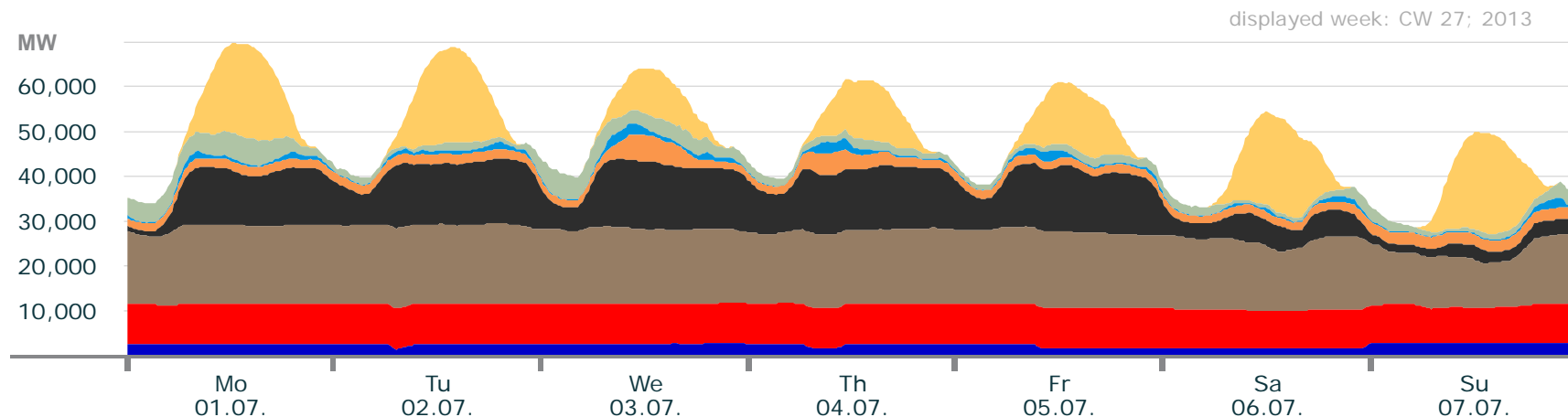
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	2.6	7.3	11.4	1.1	1.6	0	1.7	0
max. power (GW)	3	10.5	18.7	17.3	4.9	3	11.4	15.6
weekly energy (TWh)	0.5	1.7	2.7	1.6	0.4	0.1	0.8	0.8

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 27

Actual production

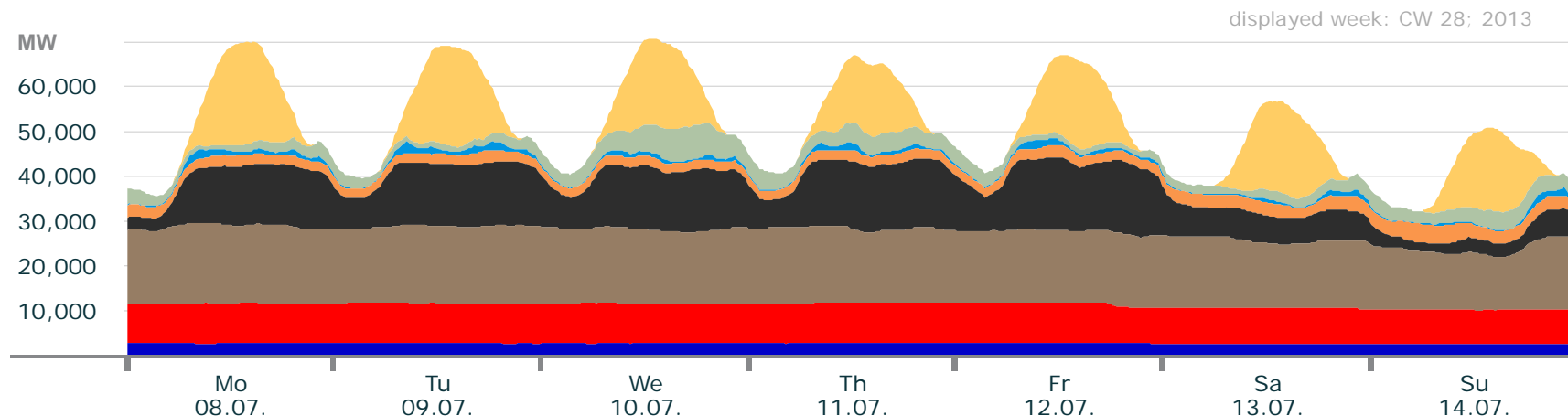


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.6	7.7	10.0	1.0	1.5	0	0.3	0
max. power (GW)	2.9	8.9	17.9	15.2	5.9	2.6	5.8	22.4
weekly energy (TWh)	0.4	1.5	2.7	1.6	0.4	0.1	0.3	1.1

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 28

Actual production

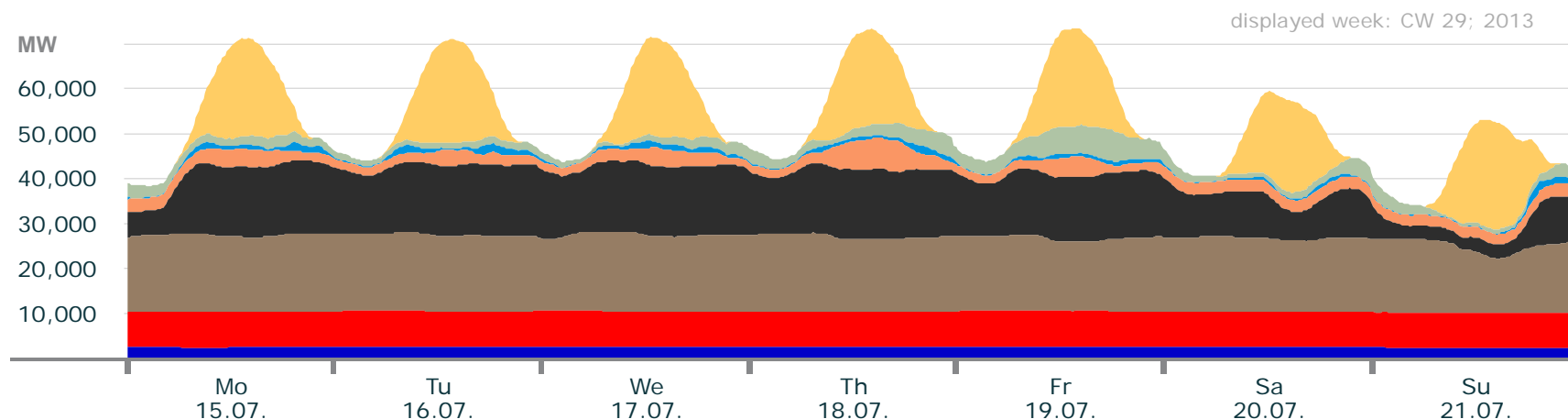


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	2.6	7.5	11.7	1.9	1.9	0	0.3	0
max. power (GW)	2.9	8.9	17.9	16.2	4.1	2.7	7.3	22.9
weekly energy (TWh)	0.5	1.4	2.7	1.7	0.4	0.1	0.4	1.2

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 29

Actual production

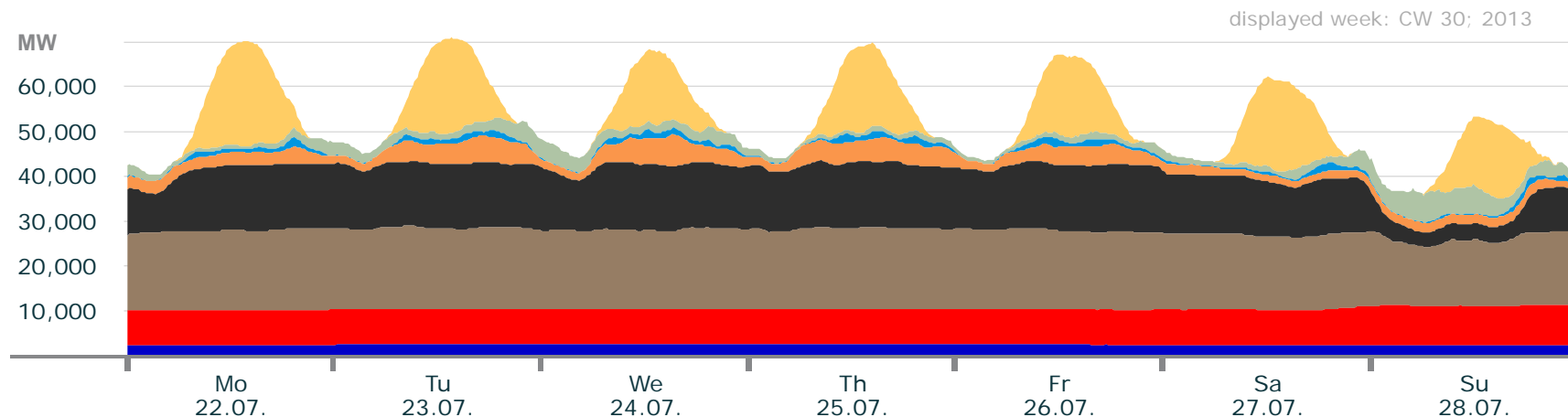


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	2.4	7.4	12.1	2.7	1.5	0	0.2	0
max. power (GW)	2.8	7.9	17.5	16.1	6.9	2.2	6.7	24
weekly energy (TWh)	0.4	1.3	2.8	2.1	0.5	0.1	0.3	1.3

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 30

Actual production

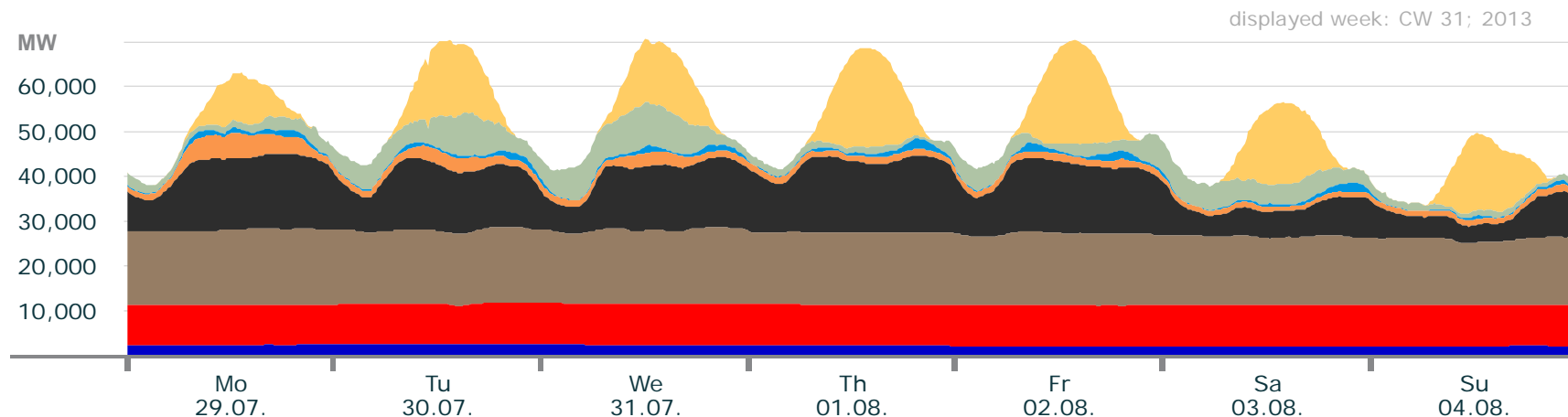


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	2.4	7.6	13.2	3.2	1.3	0	0.2	0
max. power (GW)	2.7	8.8	18.4	15	7.3	2.2	7	23.2
weekly energy (TWh)	0.4	1.3	2.9	2.1	0.5	0.1	0.3	1.1

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 31

Actual production

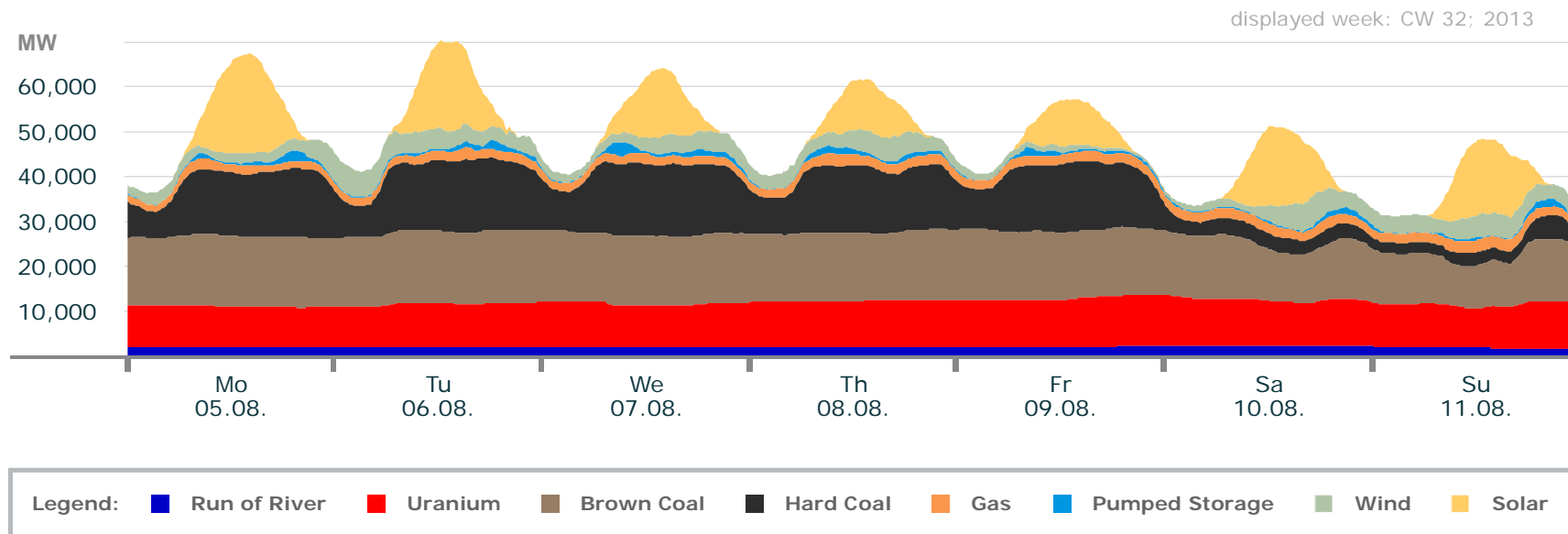


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	2.1	8.2	13.7	3.8	1.0	0	0.3	0
max. power (GW)	2.7	9.2	17	17.1	5.8	2.4	9.7	22.9
weekly energy (TWh)	0.4	1.5	2.7	1.9	0.3	0.1	0.6	1.0

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 32

Actual production

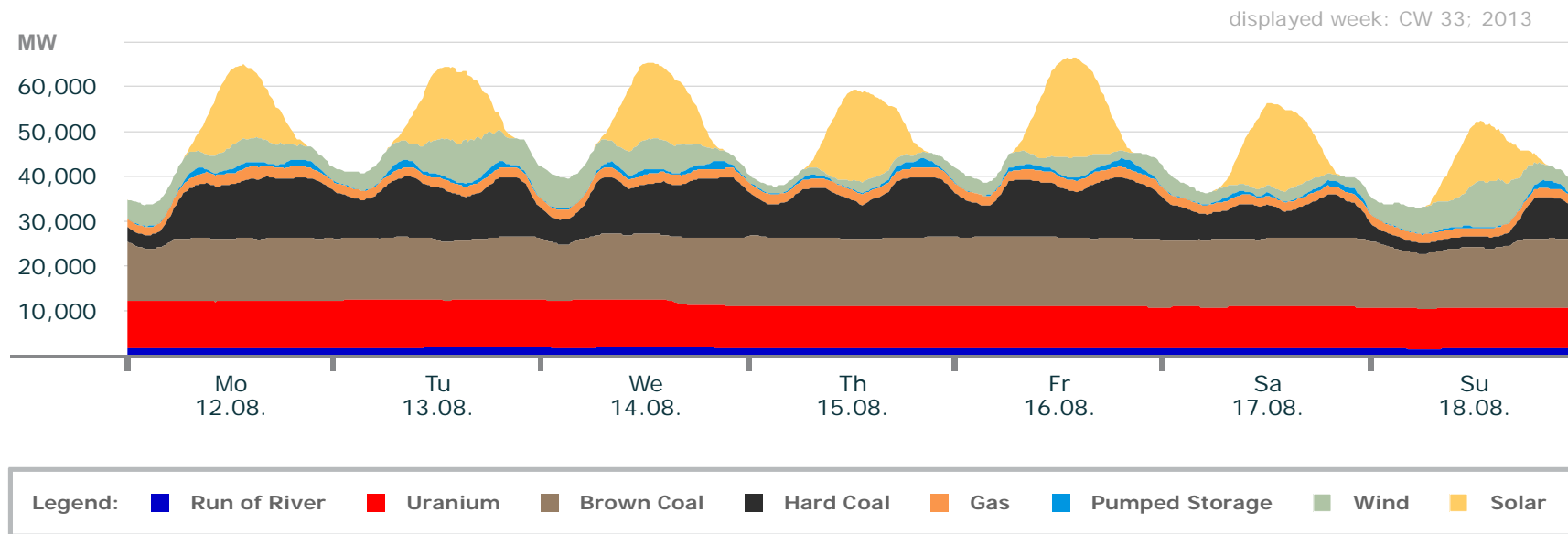


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.7	8.7	9.1	2.4	1.5	0	0.4	0
max. power (GW)	2.5	11.4	16.3	16.4	2.9	3.2	6.6	22.1
weekly energy (TWh)	0.4	1.7	2.4	1.7	0.3	0.1	0.5	0.9

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 33

Actual production

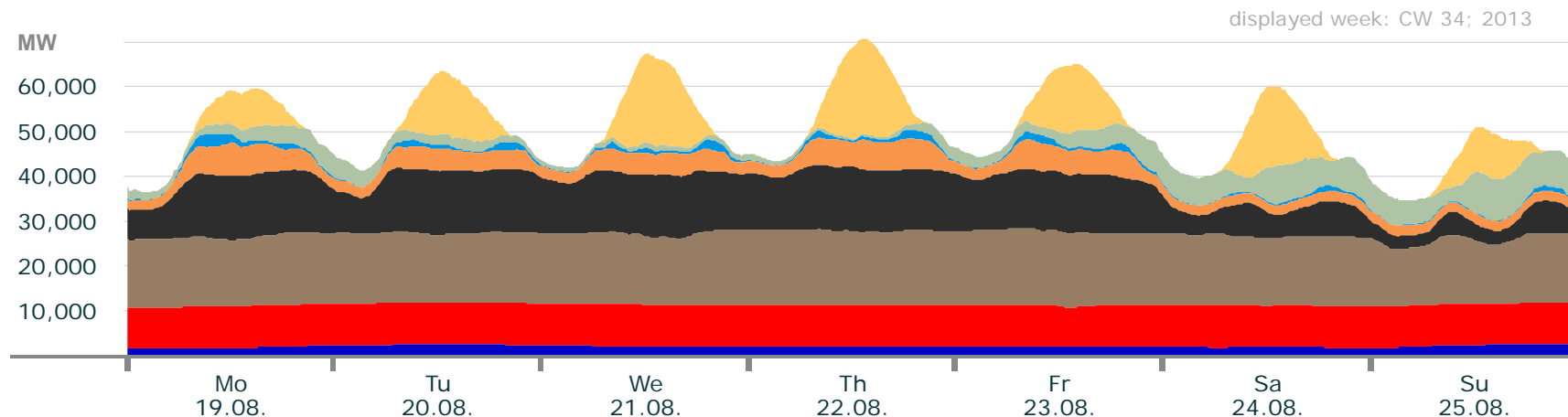


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.6	8.8	11.8	2.3	1.8	0	0.6	0
max. power (GW)	2	10.5	15.7	13.7	2.8	2.2	10.3	22.2
weekly energy (TWh)	0.3	1.6	2.4	1.6	0.4	0.1	0.7	1

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 34

Actual production

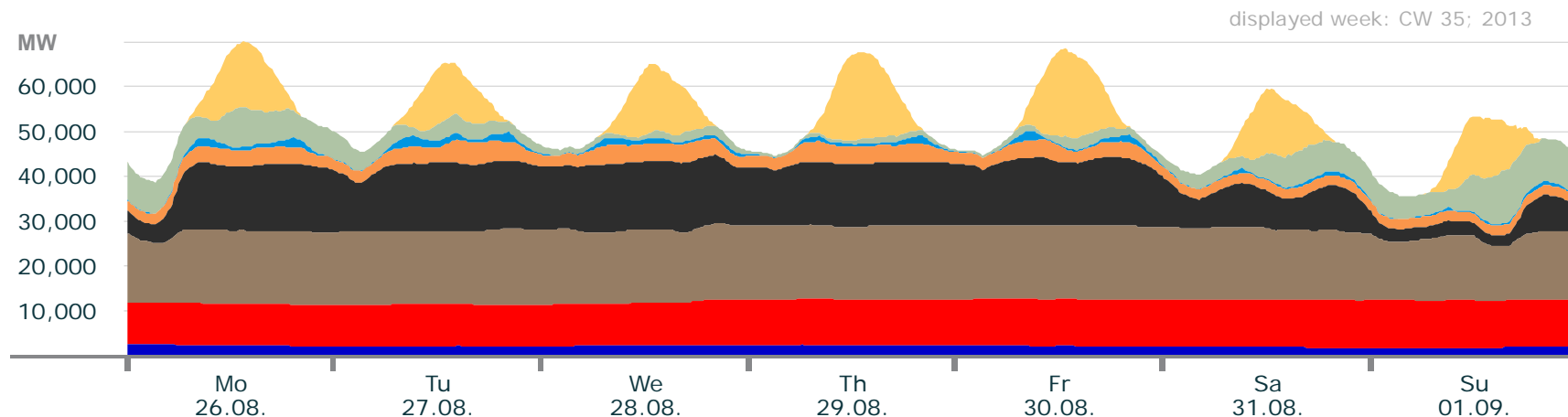


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.6	8.5	12.7	2.8	2.1	0	0.1	0
max. power (GW)	2.6	9.3	17.1	14.5	7.8	2.9	9.7	21.3
weekly energy (TWh)	0.4	1.6	2.6	1.8	0.6	0.1	0.5	0.8

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 35

Actual production

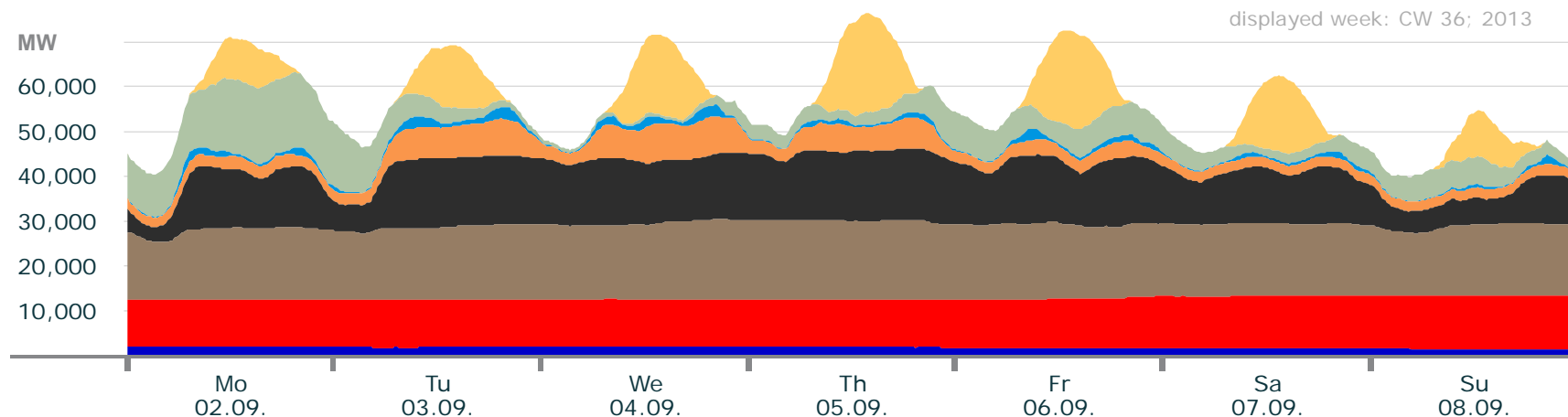


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.7	9	12.2	2.3	2.1	0	0.2	0
max. power (GW)	2.5	10.5	16.9	15.4	5.2	2.4	11.8	19.5
weekly energy (TWh)	0.4	1.7	2.7	2	0.5	0.1	0.6	0.8

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 36

Actual production

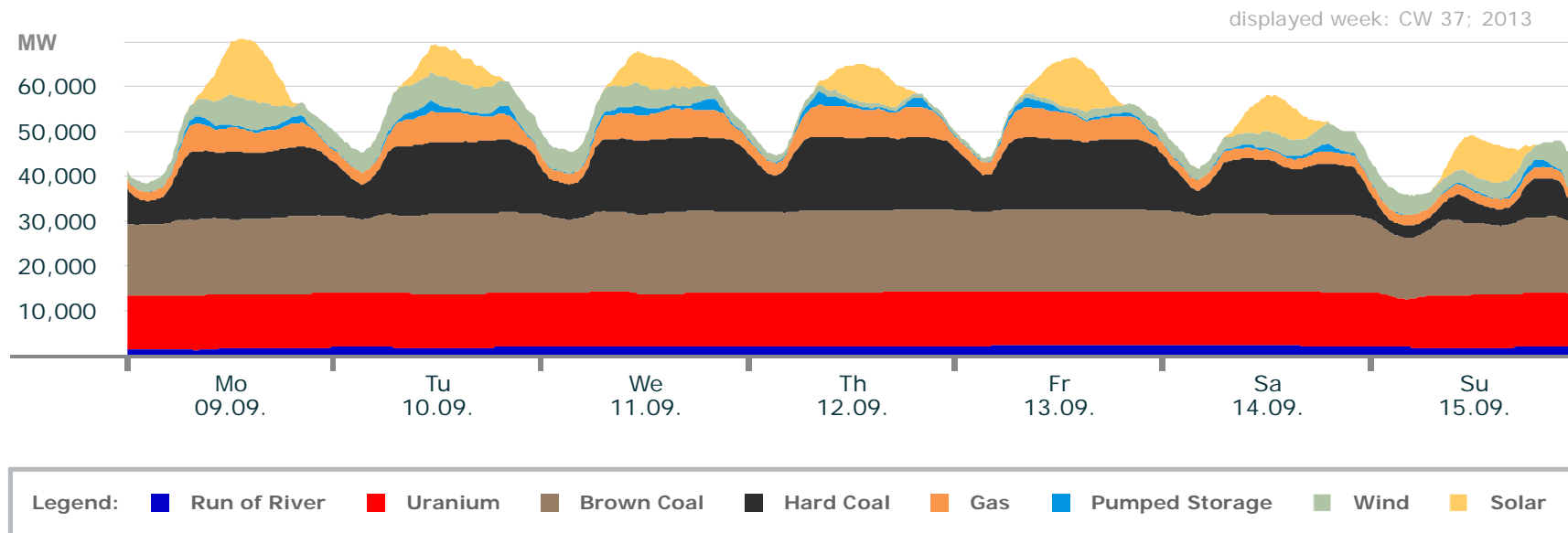


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.5	10.3	12.7	3.2	2	0	0.1	0
max. power (GW)	2	11.9	17.8	16	8.7	2.8	17	22
weekly energy (TWh)	0.3	1.8	2.7	2	0.7	0.1	0.9	0.8

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 37

Actual production

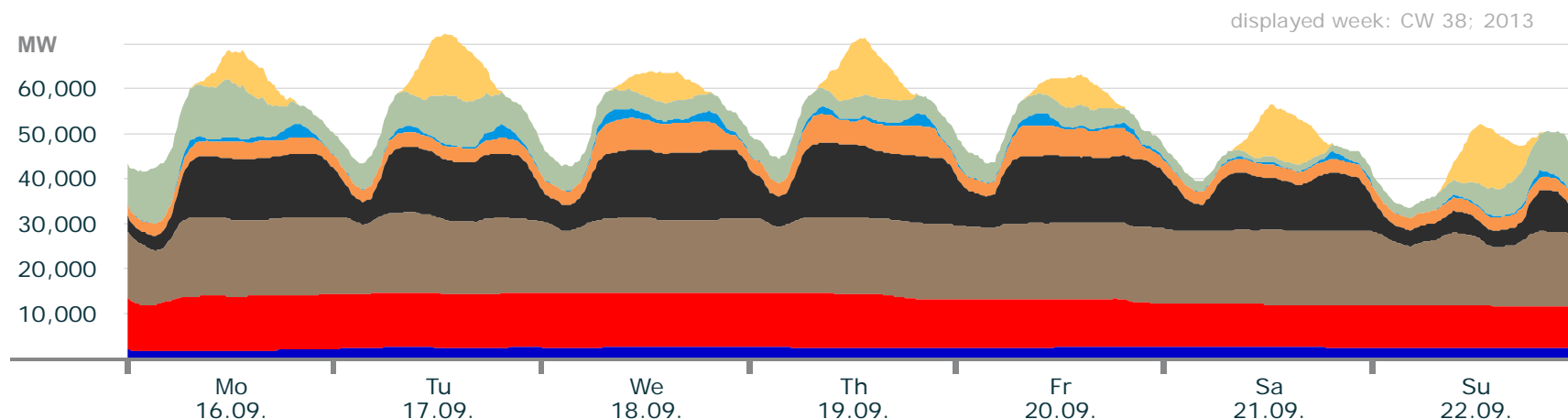


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.3	10.6	13.6	2.6	2.0	0	0.4	1.3
max. power (GW)	2.4	12.0	18.3	16.5	7.0	2.9	9.0	2.4
weekly energy (TWh)	0.3	2.0	2.9	2.0	0.7	0.1	0.5	0.3

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 38

Actual production



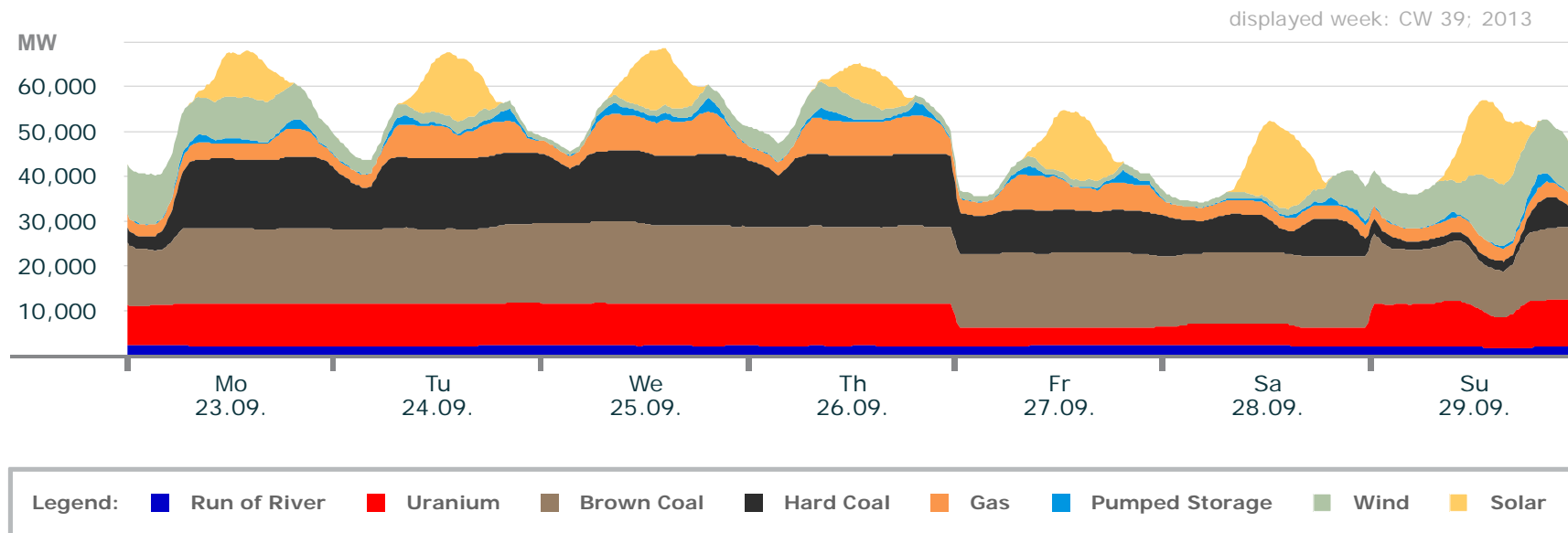
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.9	9.3	11.8	2.8	2.2	0	0.8	0
max. power (GW)	2.7	12	17.8	16.6	7.2	3.1	12.8	13.6
weekly energy (TWh)	0.4	1.9	2.7	1.9	0.7	0.1	0.9	0.5

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 39

Actual production

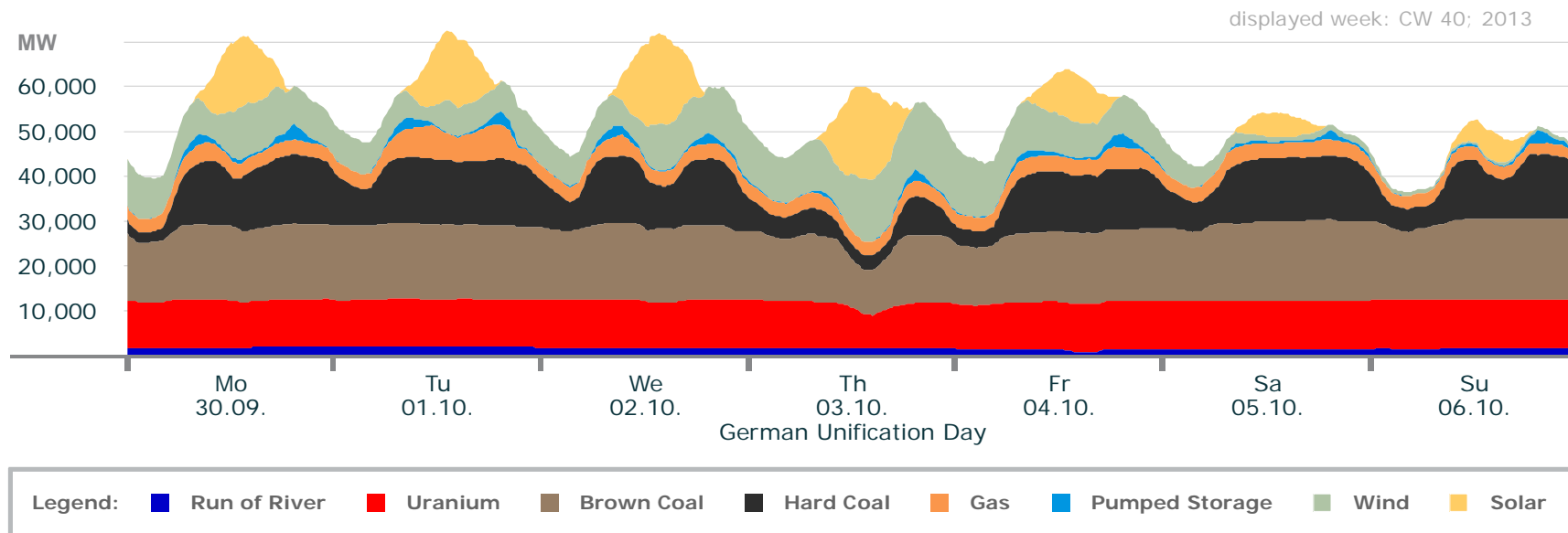


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.9	3.9	10.4	1.8	2.6	0	0.6	0
max. power (GW)	2.4	10.5	18.3	16.2	9.5	3.1	14.6	18.1
weekly energy (TWh)	0.4	1.3	2.7	1.9	0.8	0.1	0.7	0.6

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 40

Actual production

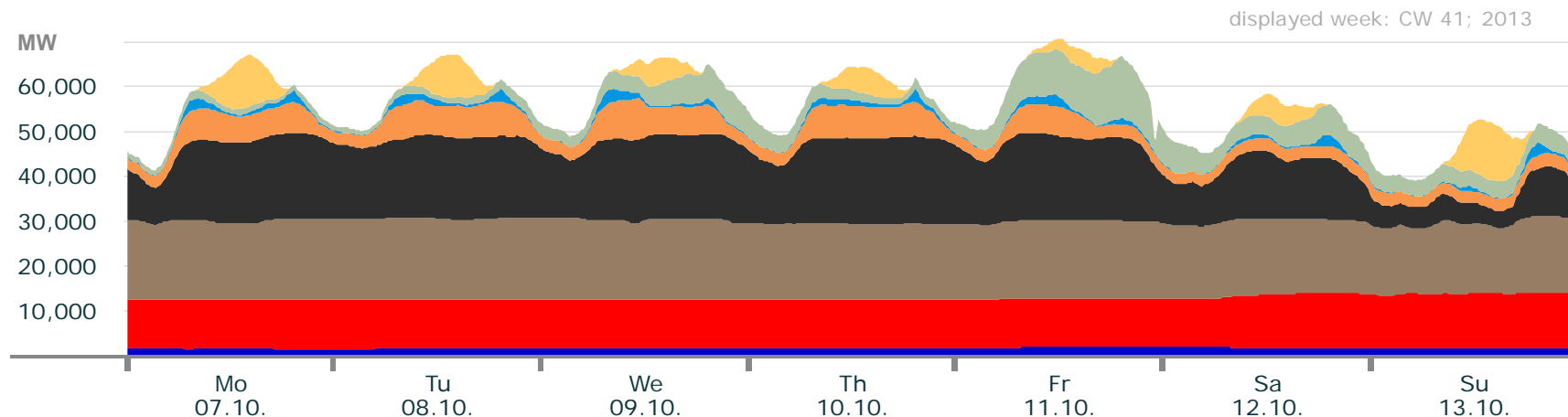


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	0.9	7.4	10	2.2	2.5	0	0.3	0
max. power (GW)	2	10.7	18.1	15.3	7.6	3.5	16.6	20.5
weekly energy (TWh)	0.3	1.8	2.7	1.8	0.6	0.1	1.2	0.6

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 41

Actual production

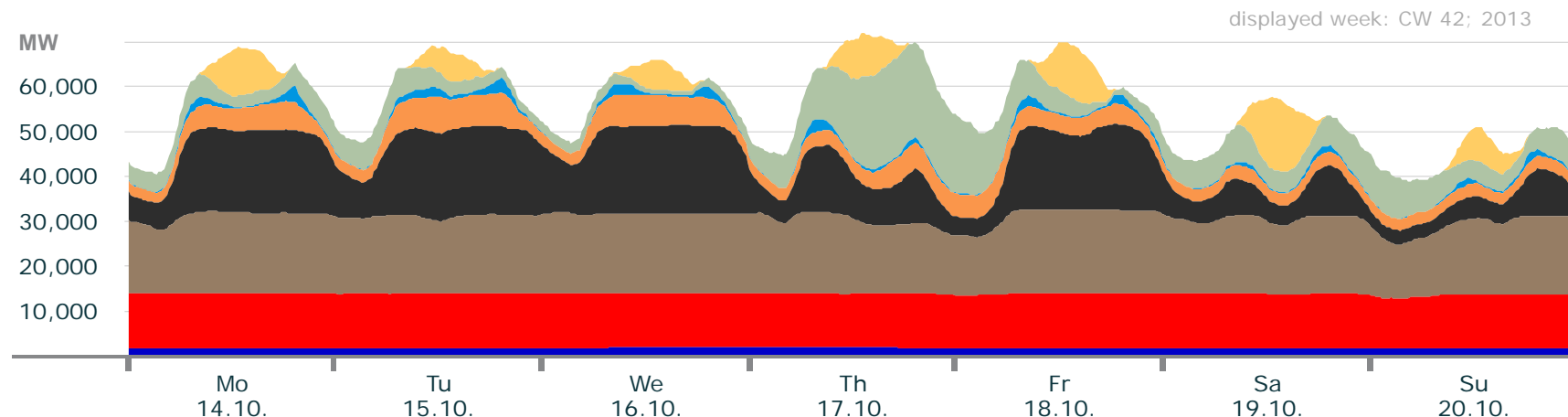


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.6	10.7	14.6	3.8	2.4	0	0.3	0
max. power (GW)	2	12.1	18.2	19.7	9.3	3	13.5	12.8
weekly energy (TWh)	0.3	1.9	2.9	2.5	0.8	0.1	0.6	0.3

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 42

Actual production

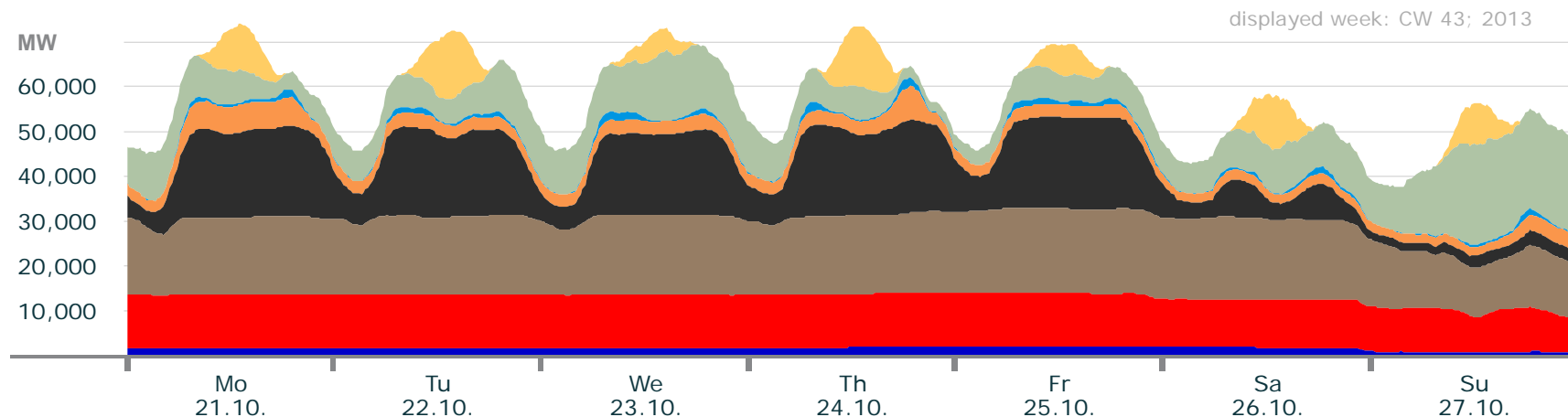


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.7	10.9	12.0	3.2	2.3	0	0.4	0
max. power (GW)	2.0	12.3	18.7	19.6	8.3	3.5	22.2	16.2
weekly energy (TWh)	0.3	2.0	2.8	2.0	0.7	0.1	1.0	0.4

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 43

Actual production



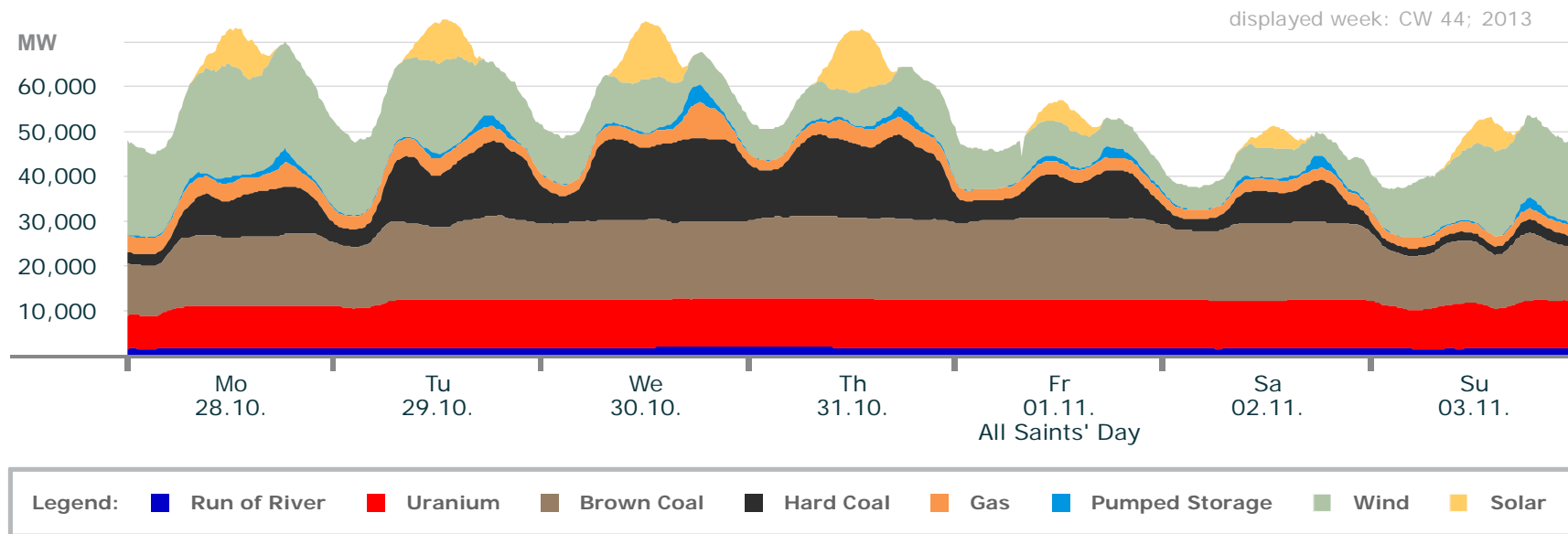
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.0	7.4	10.8	1.9	1.8	0	2.0	0
max. power (GW)	2.1	12.0	18.9	20.7	7.5	2.3	22.8	15.1
weekly energy (TWh)	0.3	1.9	2.8	2.1	0.5	0.1	1.6	0.4

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 44

Actual production

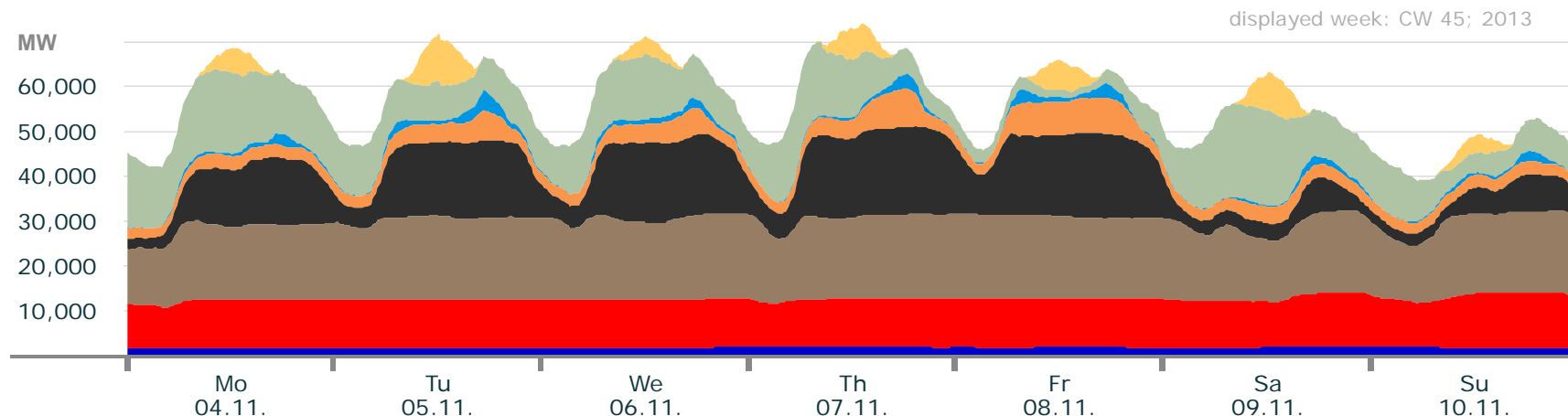


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.6	7.2	11.1	1.8	2.0	0	3.9	0
max. power (GW)	2.0	10.7	18.7	18.7	8.0	4.1	24.9	14.0
weekly energy (TWh)	0.3	1.7	2.7	1.5	0.5	0.1	2.0	0.3

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 45

Actual production



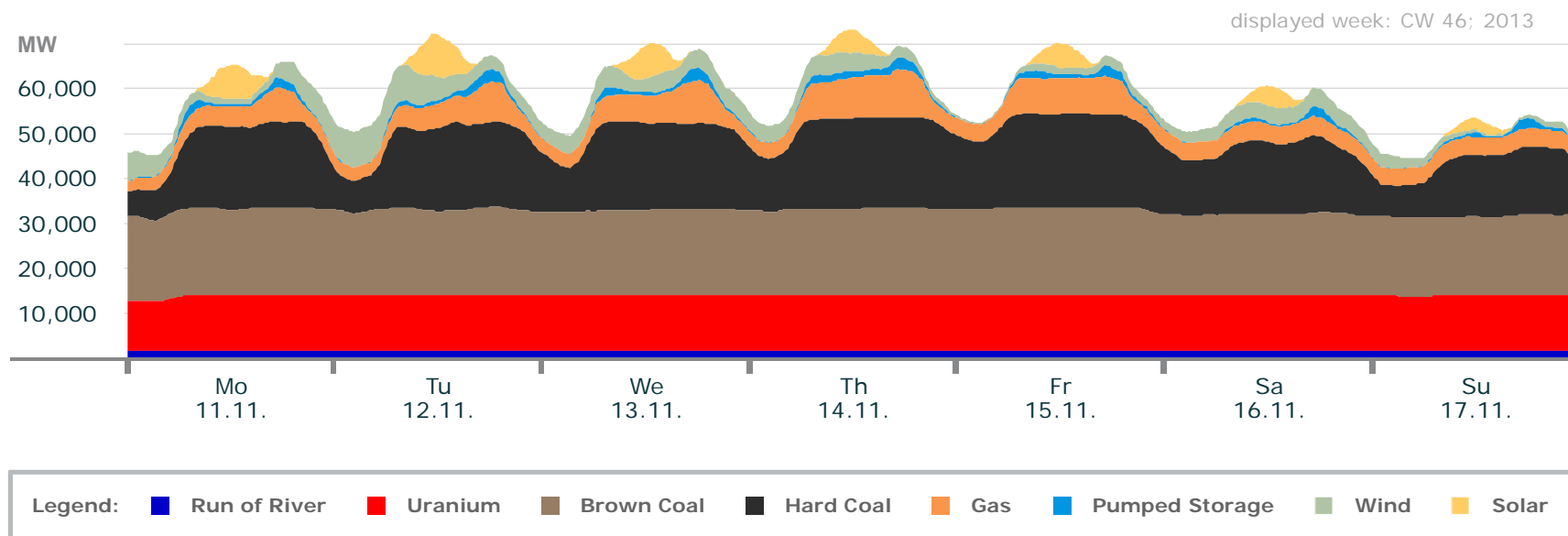
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.7	8.8	12.2	2.1	2.1	0	1.0	0
max. power (GW)	2.1	12.1	19.0	19.4	8.8	4.5	21.3	10.4
weekly energy (TWh)	0.3	1.8	2.9	1.9	0.6	0.1	1.6	0.2

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 46

Actual production

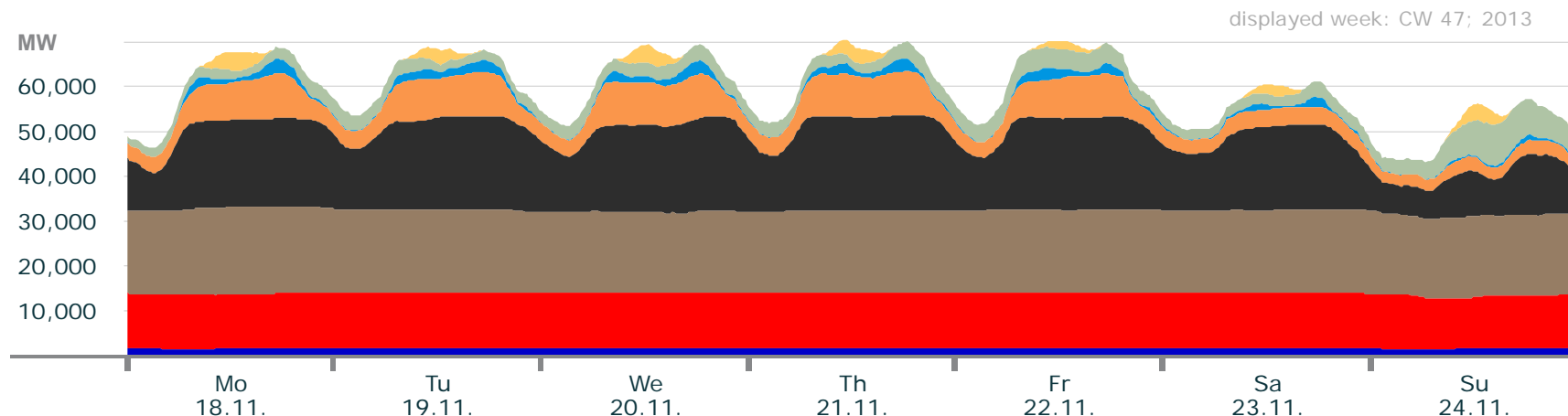


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.7	10.9	17.5	5.4	2.3	0	0.2	0
max. power (GW)	1.9	12.2	19.6	20.9	10.6	2.9	8.2	9.4
weekly energy (TWh)	0.3	2.1	3.1	2.7	0.9	0.1	0.5	0.2

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 47

Actual production

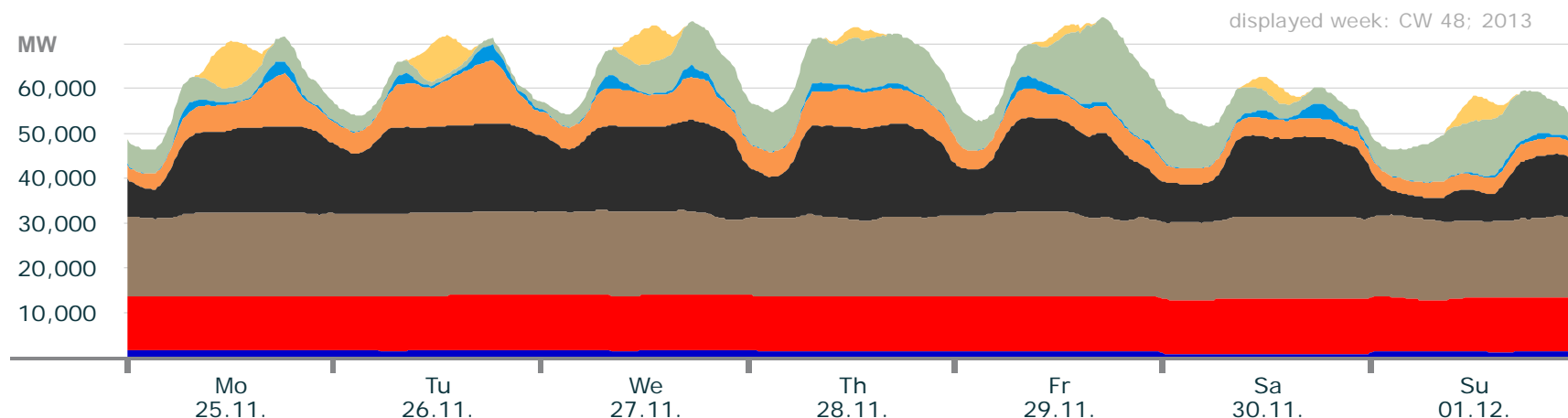


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.6	11.0	17.5	6.3	2.4	0	0.9	0
max. power (GW)	1.9	12.2	19.3	21.4	10.0	3.3	9.2	4.3
weekly energy (TWh)	0.3	2.0	3.1	2.8	1.0	0.2	0.5	0.1

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 48

Actual production



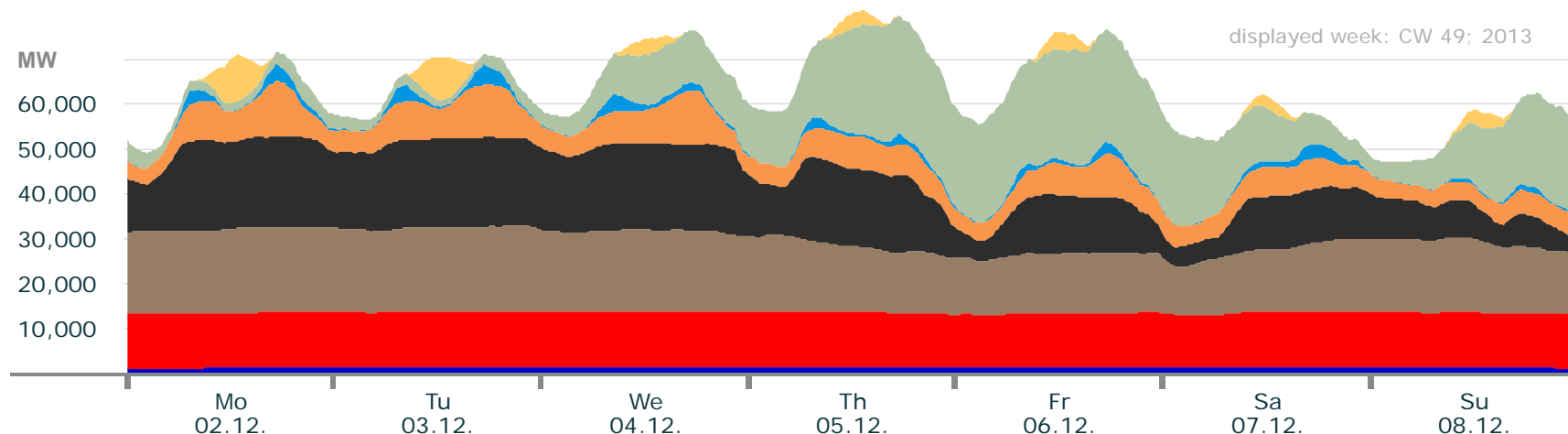
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	0.8	11.4	16.5	4.7	2.9	0	0.5	0
max. power (GW)	1.8	12.2	19.0	20.8	14.1	3.5	18.9	10.4
weekly energy (TWh)	0.3	2.0	3.0	2.6	1.0	0.1	1.2	0.2

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 49

Actual production



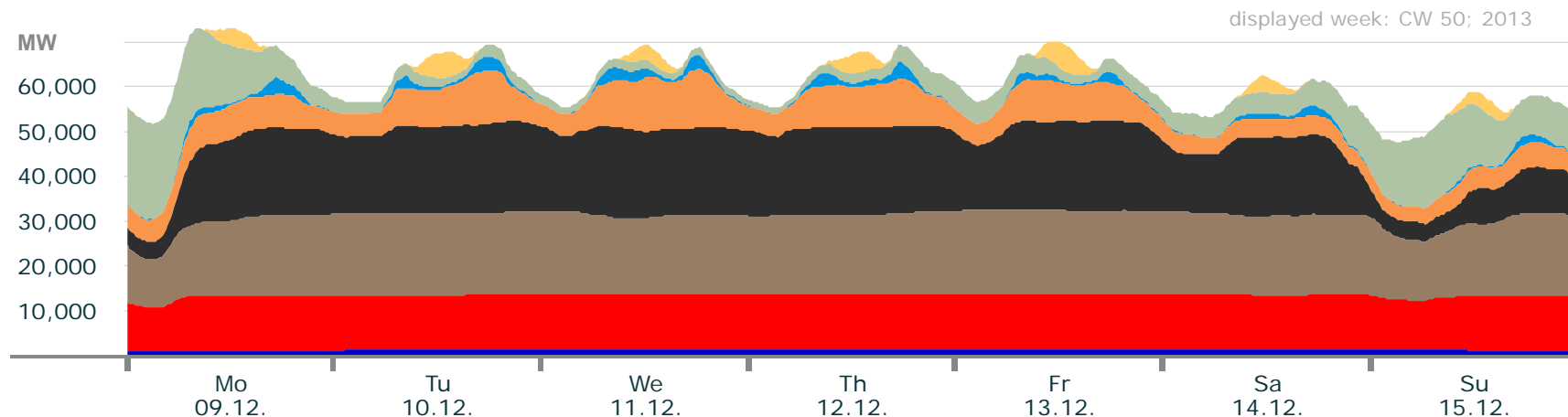
Legend: Run of River Uranium Brown Coal Hard Coal Gas Pumped Storage Wind Solar

	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.3	11.5	10.8	3.8	3.4	0	0.9	0
max. power (GW)	1.6	12.2	19	20.2	12.2	4.5	26.3	10.3
weekly energy (TWh)	0.2	2.1	2.7	2.3	1.1	0.2	1.9	0.2

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 50

Actual production

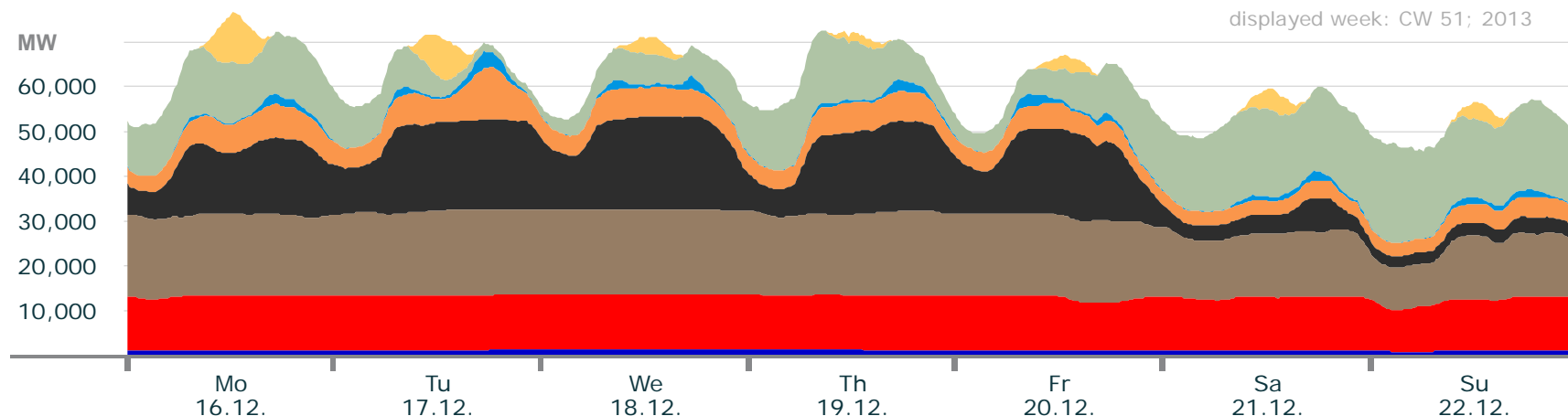


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.1	9.4	10.7	3.9	3.2	0	0.9	0
max. power (GW)	1.7	12.1	18.6	20.3	13.1	4.0	21.9	5.9
weekly energy (TWh)	0.2	2.0	2.9	2.7	1.1	0.1	0.9	0.1

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 51

Actual production

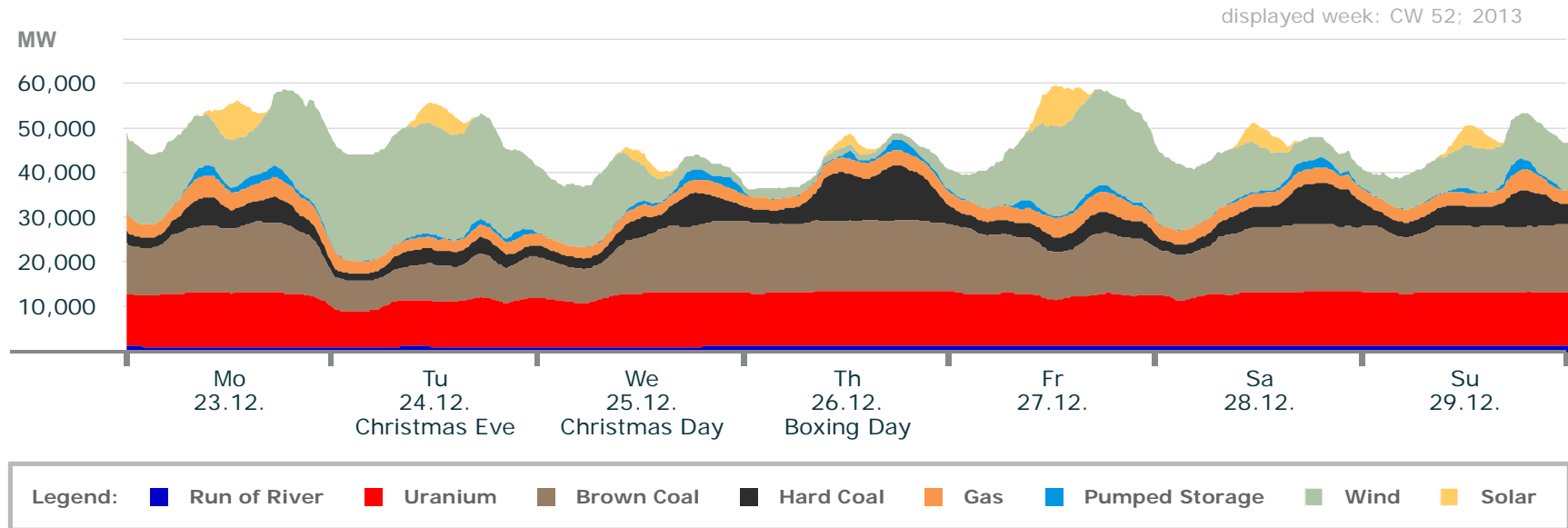


	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	1.0	9.1	9.4	2.5	3.0	0	1.0	0
max. power (GW)	1.5	12.1	19.1	20.6	11.9	3.9	22.4	11.0
weekly energy (TWh)	0.2	2.0	2.8	2.0	0.9	0.1	1.9	0.2

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Electricity Production in Germany: Calendar Week 52

Actual production



	RoR	Uran	BC	HC	Gas	PSt	Wind	Solar
min. power (GW)	0.9	7.9	6.7	1.7	2.4	0	1.1	0
max. power (GW)	1.3	12.1	16.0	12.3	4.9	2.7	25.0	9.1
weekly energy (TWh)	0.2	1.9	2.1	0.8	0.5	0.1	2.0	0.2

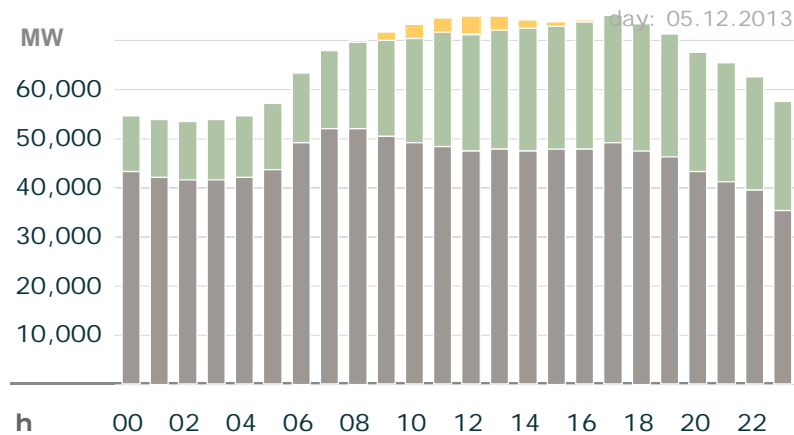
Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

AGENDA

- Annual energies
- Monthly energies
- Weekly energies
- Daily energies
- Annual power curves
- Monthly power curves
- Weekly power curves
- Exemplary daily power curves

Date of maximum peak wind power production (in GW): Thursday 5th of December

Actual production



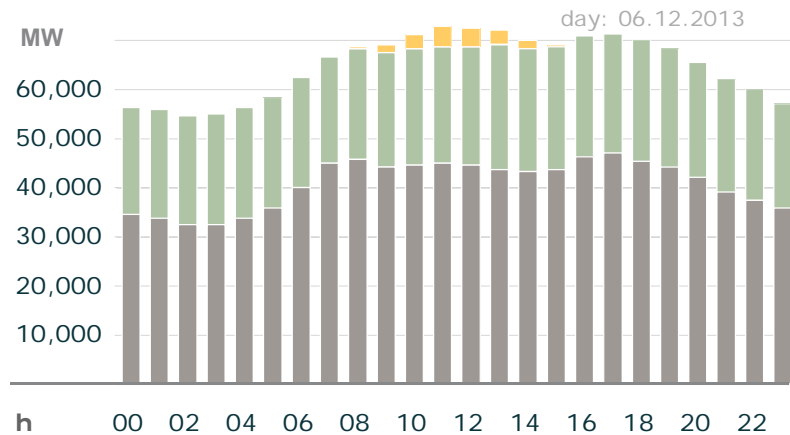
Legend: ■ Conventional > 100 MW ■ Wind ■ Solar

- Solar: max. 3.6 GW; 16 GWh
- Wind: max. 26.3 GW at 18:15 (+1:00); 485 GWh
- Conventional: max. 52.0 GW; 1130 GWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Date of maximum wind energy production (in GWh): Friday 6th of December

Actual production



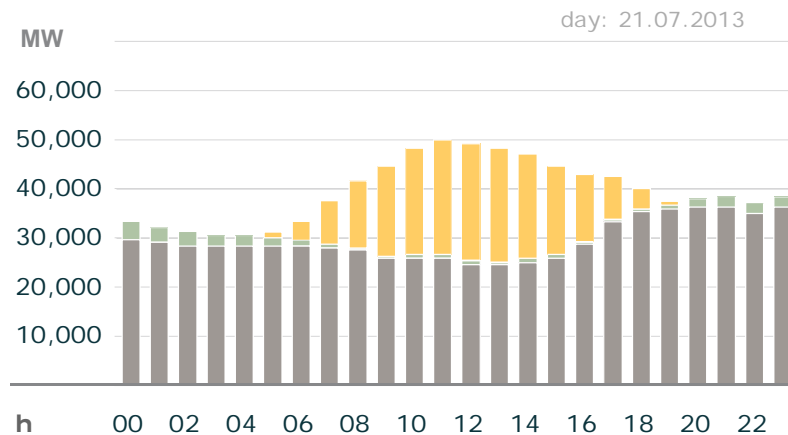
Legend: ■ Conventional > 100 MW ■ Wind ■ Solar

- Solar: max. 4.0 GW; 19 GWh
- Wind: max. 25.5 GW; 563 GWh
- Conventional: max. 47.1 GW; 1012 GWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Date of maximum total and peak solar power production (in GW and GWh): **Sunday 21st of July**

Actual production

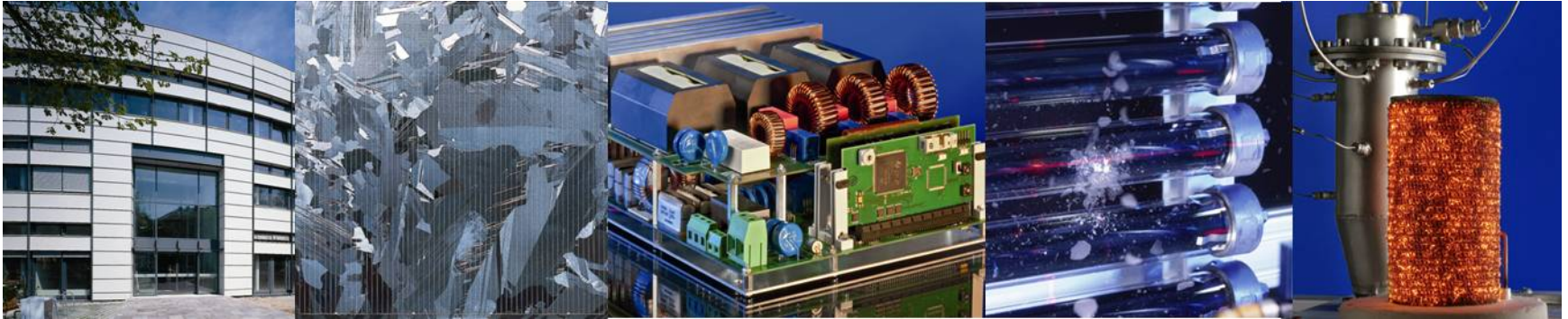


Legend: ■ Conventional > 100 MW ■ Wind ■ Solar

- Solar: max. 24.0 GW at 13:30 (+2:00); 204 GWh
- Wind: max. 3,7 GW; 34 GWh
- Conventional: max. 36,3 GW; 710 GWh

Graph: Bruno Burger, Fraunhofer ISE; Data: EEX Transparency Platform

Thank you for your Attention!



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