



sonnen

energy is yours

sonnen.

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Introduction to sonnen.

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sonnen in Australia.

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Our Vision

“Our goal is clean and affordable  
energy for everyone.”

Christoph Ostermann, CEO sonnen GmbH



sonnen.

# Who we are.

**sonnen ...**

...Global market leader for lithium iron phosphate batteries

...Multiple national and international awards

...Operator of the world's largest electricity sharing platform

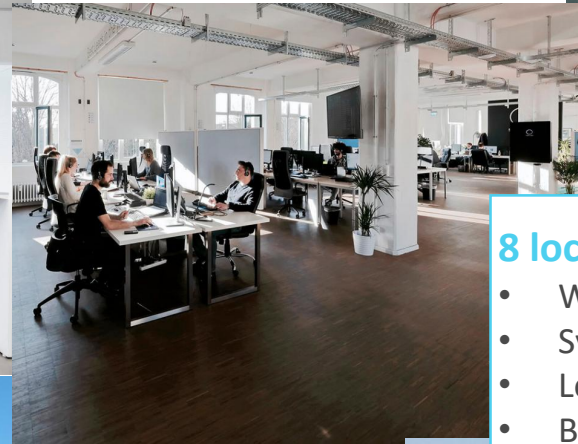
...More than 30,000 battery storage units installed worldwide

...One of the fastest growing technology companies in Germany

...More than 120,000 people supplied with electricity from renewable energy sources

sonnen.

# Global Company, Local Support.



- 8 locations in 5 countries.**
- Wildpoldsried / Berlin (Germany)
  - Sydney / Adelaide (Australia)
  - Los Angeles / Atlanta (USA)
  - Bristol (UK)
  - Bergamo (Italy)





sonnen.

# Product history.



2010

sonnenBatterie  
classic



2011

sonnenBatterie  
classic 2.0



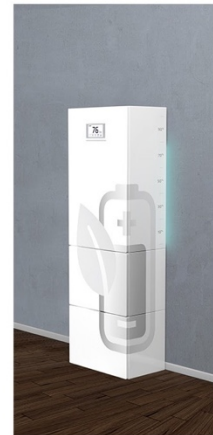
2012

sonnenBatterie  
classic 2.0,  
comfort



2013

sonnenBatterie  
classic 2.0,  
comfort



2014

sonnenBatterie  
classic 2.0,  
comfort,  
eco 5.0



2015

sonnenBatterie  
eco 7.0



2016

sonnenBatterie  
eco 8.0



2017

sonnenBatterie  
eco 9.43

sonnenCommunity

sonnenFlat



2018

sonnenCharger

sonnenBatterie  
hybrid 9.53

# Awards.

April 2018  
Red Dot Award  
Product Design 2018.



April 2018  
INNOVATION AWARD  
IT 2018.



January 2018  
Global Cleantech 100  
list 2018.



August 2017  
Top storage battery  
2017.



April 2017  
1.000 Europe's Fastest  
Growing Companies.



January 2017  
Global Cleantech 100  
„Continued Excellence  
Award“.



Januar 2017  
Zayed Future  
Energy Prize.



December 2016  
German Sustainability  
Award 2016.



November 2016  
Focus Wachstums-  
Champion 2017.



November 2016  
Deloitte Technology  
Fast 50 Award 2016.



June 2016  
50 Smartest Companies  
2016.



June 2016  
Wirtschaftswoche Top  
Storage Battery 2016.

sonnen in Australia.

# sonnenFactory in Adelaide.



Announcement of the sonnenFactory in Adelaide in August 2018:

David Ridgway (Trade Minister), Steven Marshall (Premier), Christoph Ostermann (CEO & Founder sonnen), Daniel van Holst Pellekaan (Energy Minister).



sonnen in Australia.

# sonnenFactory in Adelaide.

South Australia has a long tradition in manufacturing and a strong focus on renewable energy. This makes it the perfect setting for sonnen's third manufacturing facility.

- Opening in November 2018
- Capacity for 10.000 systems annually, potentially more
- Hundreds of local jobs will be created
- Factory will be located in the former Holden factory in Elizabeth

*"We are very excited to begin manufacturing in SA for the Australian and export markets and anticipate Australia will become the world's number one market for energy storage systems"*

Christoph Ostermann, CEO & Co-Founder sonnen.



sonnen in Australia.

# German Designed, Australian Made.

sonnen proudly presents:

The first intelligent lithium storage system made in South Australia!

## sonnenBatterie

- Intelligent all-in-one energy storage system
- Safe & reliable Lithium-iron-phosphate technology
- Modular
- Energy management to maximize self-consumption
- Monitoring via portal and app
- Energy security & blackout protection





sonnen in Australia.

## South Australia's Battery Subsidy.

**100,000,000 Dollars...**

...to support the transition to a clean and affordable energy future.

- Funding for around 40,000 households.
- Up to 6000\$ per installation.
- 500\$ / kWh for regular customers
- 600\$ / kWh for Energy Concession Holders

Plus another

**100,000,000 Dollars...**

...in loans to support the installation of solar and batteries.

„The South Australian Government is delivering on its commitment to provide more affordable, reliable, secure energy for all South Australians.“

[www.energymining.sa.gov.au](http://www.energymining.sa.gov.au)

sonnen in Australia.

# South Australia's Battery Subsidy.

What you need to know.

- Funding declines over time.
- Within the first three months, only storage systems assembled in Australia are eligible.
- Subsidy scheme starts in October
- Financing offer via Commonwealth Government's Clean Energy Finance Corporation (CEFC)
- Details will be released with launch in October

Go to

[http://www.energymining.sa.gov.au/energy\\_implementation/home\\_battery\\_scheme](http://www.energymining.sa.gov.au/energy_implementation/home_battery_scheme)

for more information.





Next:  
Product &  
Innovation

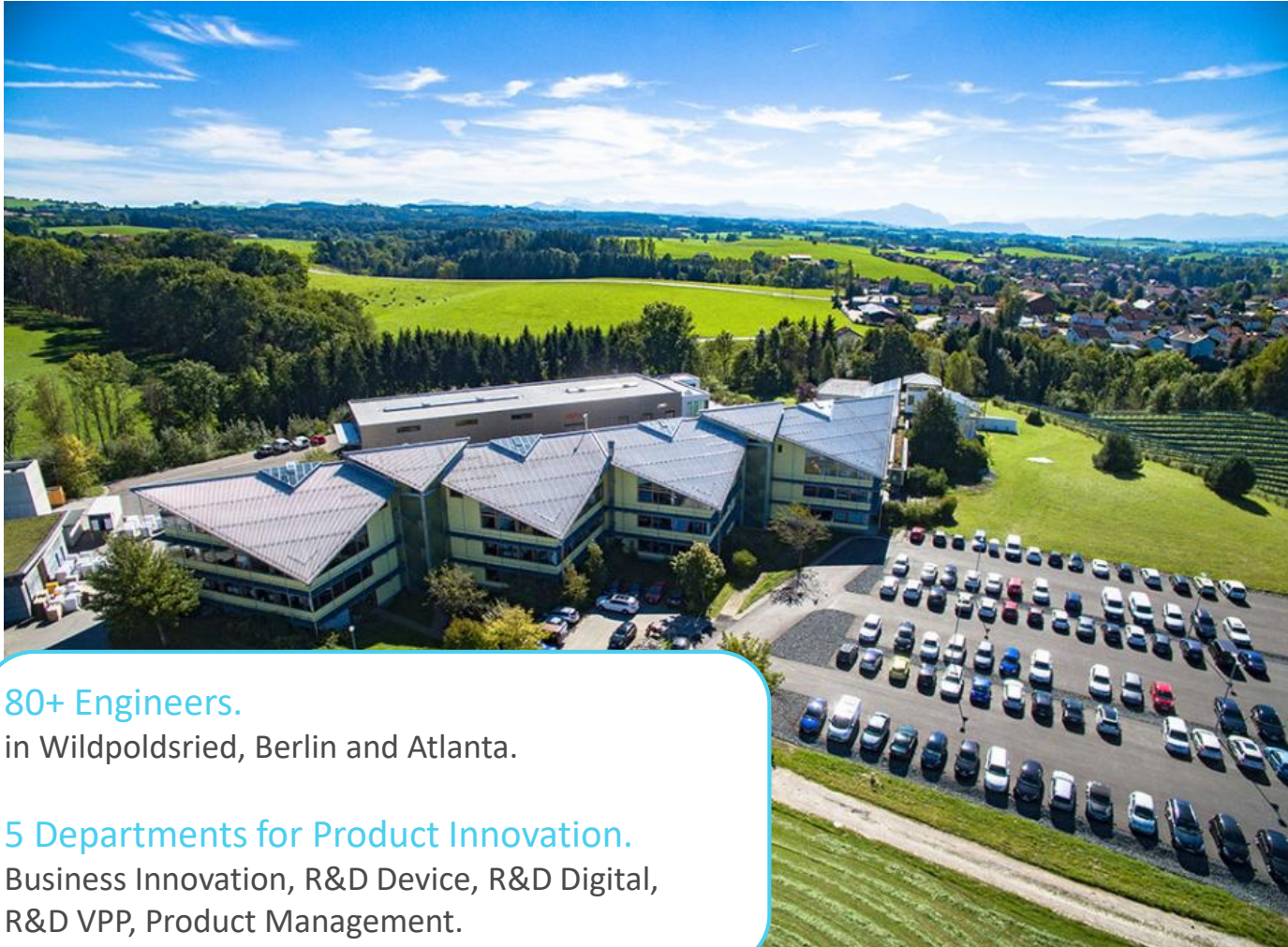


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Innovation.

# Product Development at sonnen.



80+ Engineers.

in Wildpoldsried, Berlin and Atlanta.

5 Departments for Product Innovation.

Business Innovation, R&D Device, R&D Digital, R&D VPP, Product Management.



Battery Lab





sonnenBatterie.

# Five reasons for sonnen.

## Safe

Lithium-Iron-Phosphate cell technology

## Long lasting

10 years, 10.000 cycles

## Intelligent

In-built battery management system for maximum self-consumption

## Proven

Market leading technology

## Local

German designed, Australian made



sonnenBatterie.

# Five reasons for sonnen.

## Safe

Lithium-Iron-Phosphate cell technology

## Long lasting

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## Intelligent

In-built BMS for maximum self-consumption

## Proven

Market leading technology

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German designed, Australian made

LFP



NMC



VS



sonnenBatterie.

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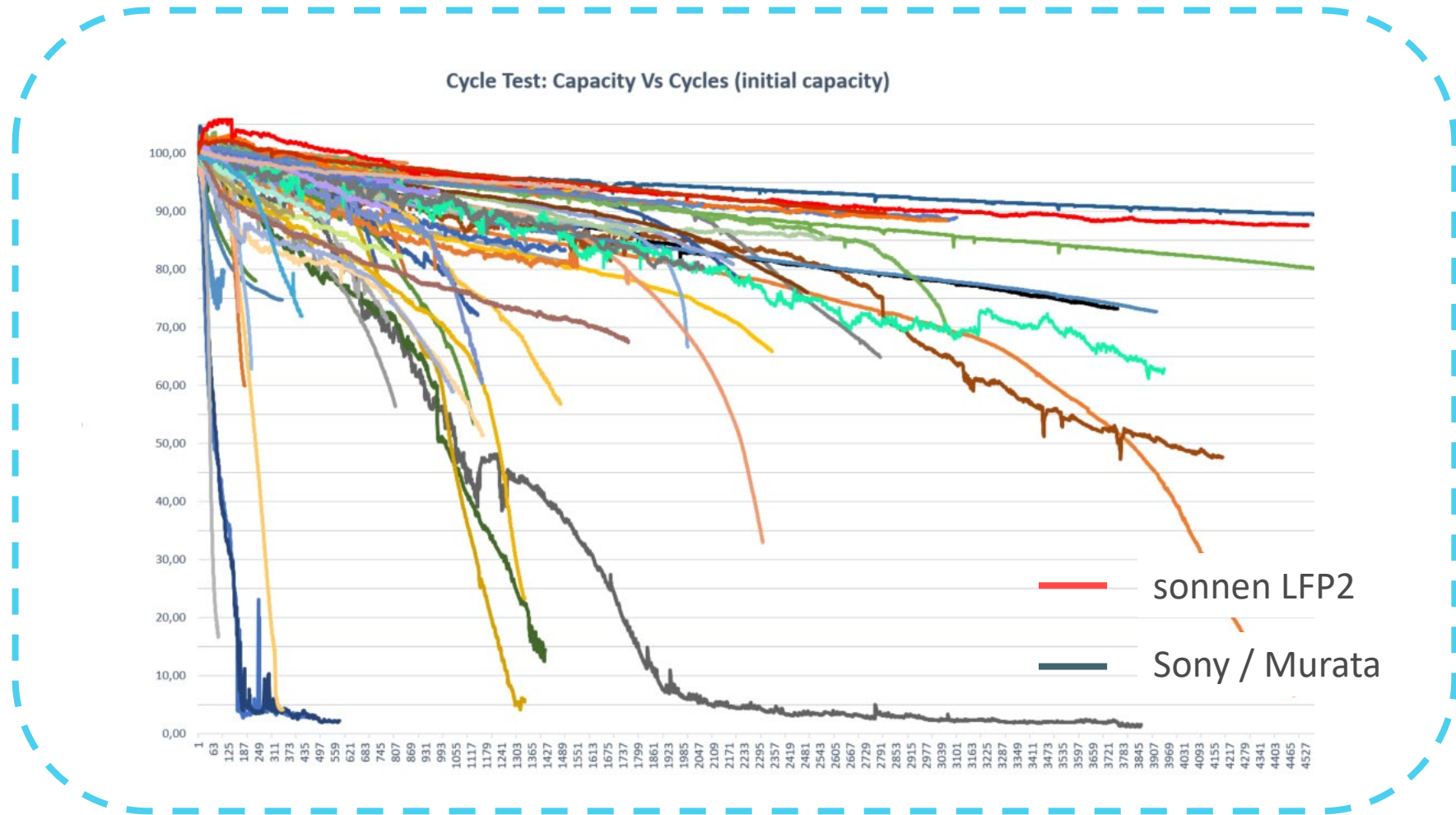
In-built BMS for maximum self-consumption

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sonnenBatterie.

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Autonomy  
Rate of  
80%+



The energy management system automatically monitors and adjusts as needed.

- Maximisation of self-consumption
- Real-time data from consumption and PV Generation;
- Rapid Response – Maximizing Charge / Discharge
- Load Control – Relays
- Price Arbitrage – Time of Use



sonnenBatterie.

# Five reasons for sonnen.

## Safe

Lithium-Iron-Phosphate cell technology

## Long lasting

10 years, 10.000 cycles

## Intelligent

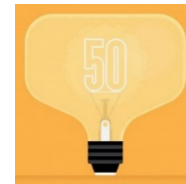
In-built BMS for maximum self-consumption

## Proven

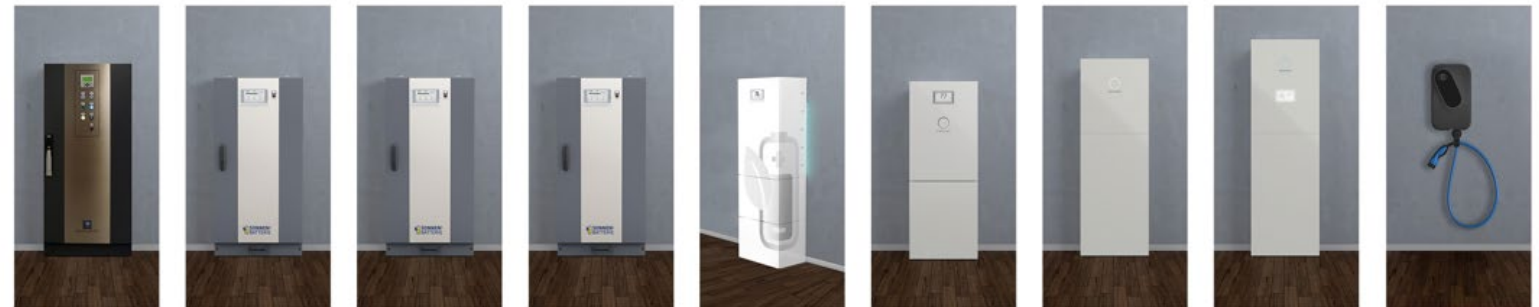
Market leading technology

## Local

German designed, Australian made



- Global Market Leader
- Currently on 9<sup>th</sup> Product Generation
- Over 30,000 systems sold and installed



2010

2011

2012

2013

2014

2015

2016

2017

2018

sonnenBatterie classic

sonnenBatterie classic 2.0

sonnenBatterie classic 2.0, comfort

sonnenBatterie classic 2.0, comfort

sonnenBatterie classic 2.0, comfort, eco 5.0

sonnenBatterie eco 7.0

sonnenBatterie eco 8.0

sonnenBatterie city

sonnenCharger

sonnenCommunity

sonnenCommunity

sonnenFlat

sonnenBatterie.

# Five reasons for sonnen.

## Safe

Lithium-Iron-Phosphate cell technology

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10 years, 10.000 cycles

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In-built BMS for maximum self-consumption

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Market leading technology

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German designed, Australian made





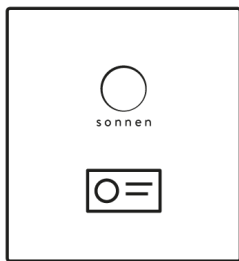
Products.

# Product Overview.

For customers with existing or new PV.

Available  
NOW

sonnenBatterie  
eco



6 – 16 kWh

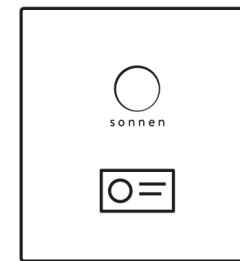
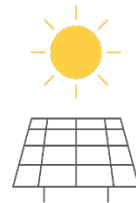
Modular in 2 kWh steps  
2.5 kW charge / discharge  
Supports any third party PV

2.5 kW  
No PV recharge

For customers with new PV.

Available  
January  
2019

sonnenBatterie  
hybrid



5 – 15 kWh

Modular in 2.5 kWh steps  
3.3 kW charge / discharge  
Integrates up to 7 kWp PV

2.5 kW  
PV recharge

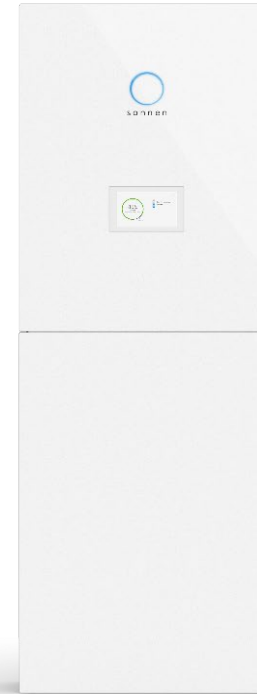
Products.

# Product Overview.



sonnenBatterie eco 8.2

Available  
NOW



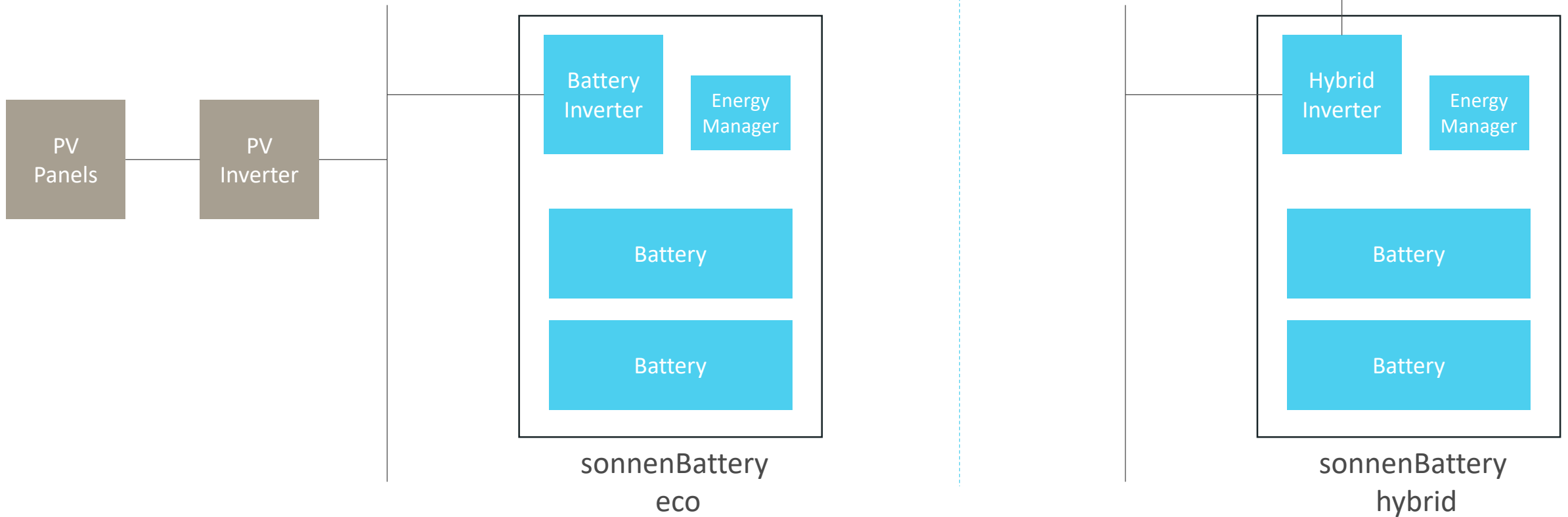
sonnenBatterie hybrid 9.53

Available  
January  
2019

Products.

# Product Overview.

How does the sonnenBattery work?





Products.

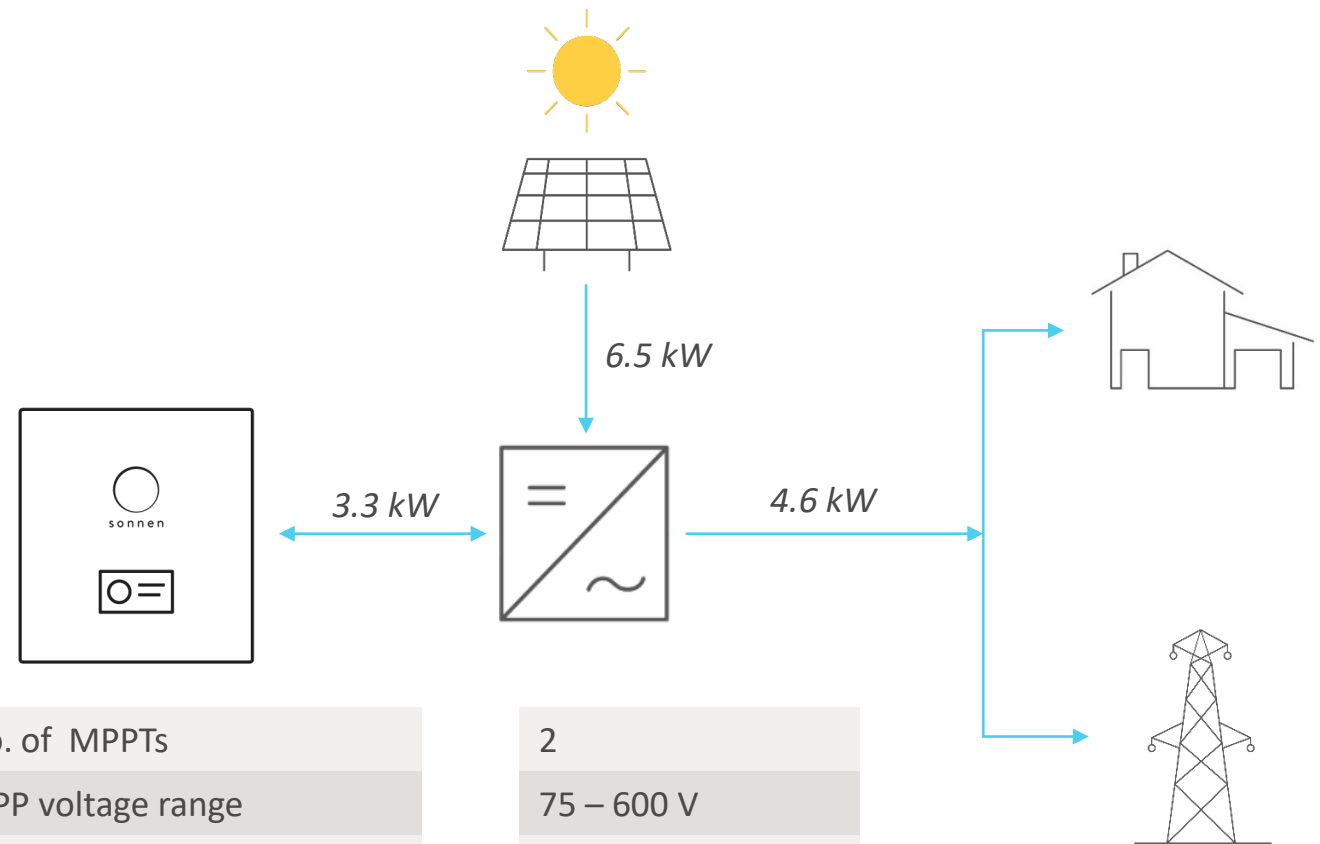
# Comparison.

	sonnenBatterie eco 8.0						sonnenBattery eco 8.2						sonnenBatterie eco 9.43					sonnenBatterie hybrid 9.53				
Phases	Three phase						Single phase						Single Phase					Single Phase				
Nominal Capacity (kWh)	6	8	10	12	14	16	6	8	10	12	14	16	5	7.5	10	12.5	15	5	7.5	10	12.5	15
Usable Capacity (kWh)	6	8	10	12	14	16	6	8	10	12	14	16	4.5	6.75	9	11.2 5	13.5	4.5	6.75	9	11.25	13.5
Charge /discharge power (kW)	2.5	3.3					2.5						2.5	3.3				2.5	3.3			
Max. backup power (kW)	-						2.5						-					3.1				
Continous backup power (kW)	-						2.5						-					2.5				
PV	Any third party PV inverter						Any third party PV inverter						-					Up to 7 kWp				

This value decides about how much subsidy money you can get.

hybrid 9.53

# Technical Data.



Max. power PV to AC	4.6 kW
Max. power PV to battery	3.3 kW
Max. Input power PV	6.5 kW
Max. PV size (kWp)	7
Maximum recommended PV size	≤ ~7 kWp
Operation Mode	single phase
Charge / Discharge (kW)	3.3
Capacity	5— 15 kWh
DoD	90%

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Operation Mode	single phase
Charge / Discharge (kW)	3.3
Capacity	5— 15 kWh
DoD	90%

No. of MPPTs	2
MPP voltage range	75 – 600 V
Input voltage PV	100 – 750 VDC
Max. Input current PV	13 A
Power factor range	0.9 cap. – 0.9 ind.
DC Connection	sunclix
Max. Backup Power (1s)	3.1 kW
Continuous Backup Power	2.5 kW

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Input voltage PV	100 – 750 VDC
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Next:  
Energy  
Retail



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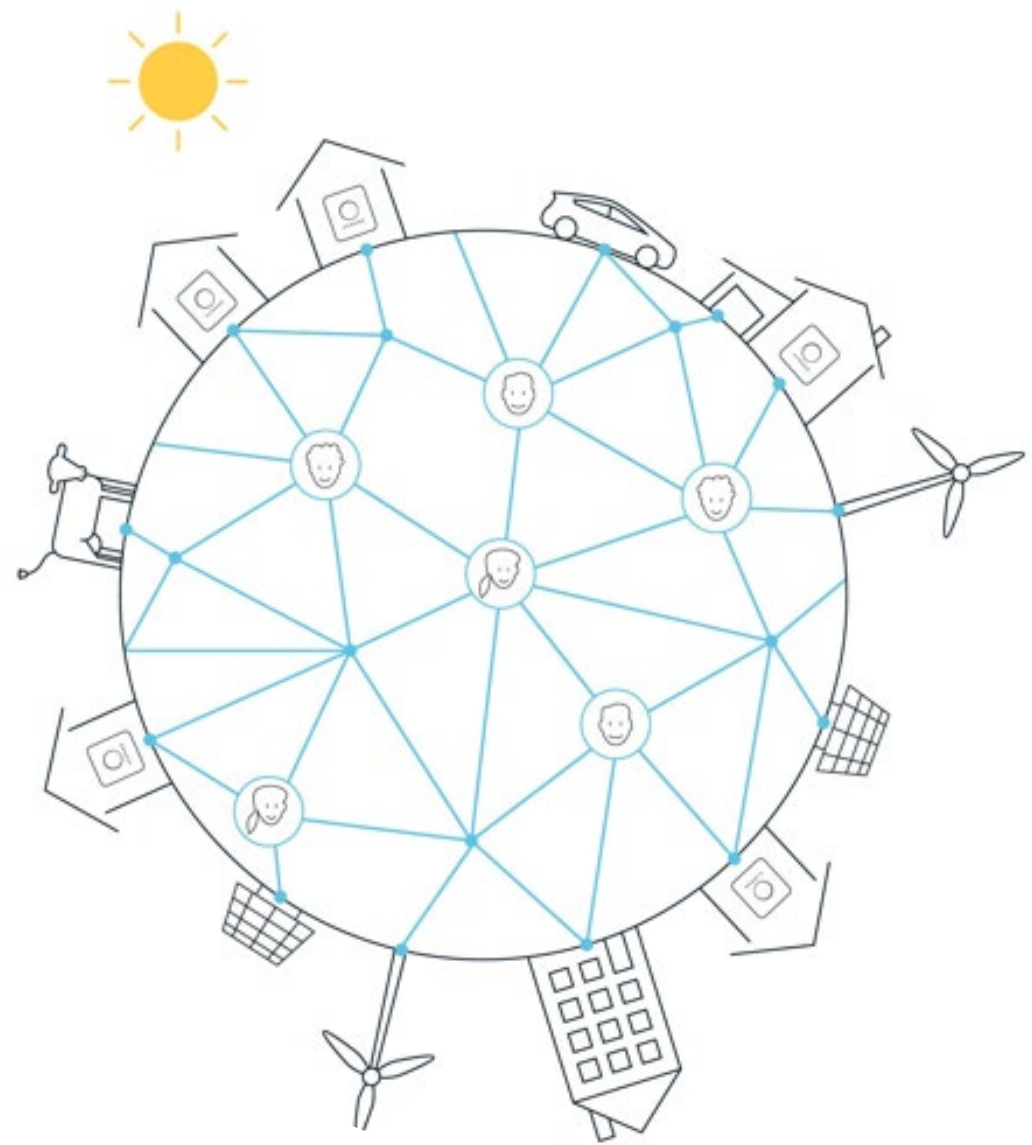
energy is yours



sonnenCommunity.

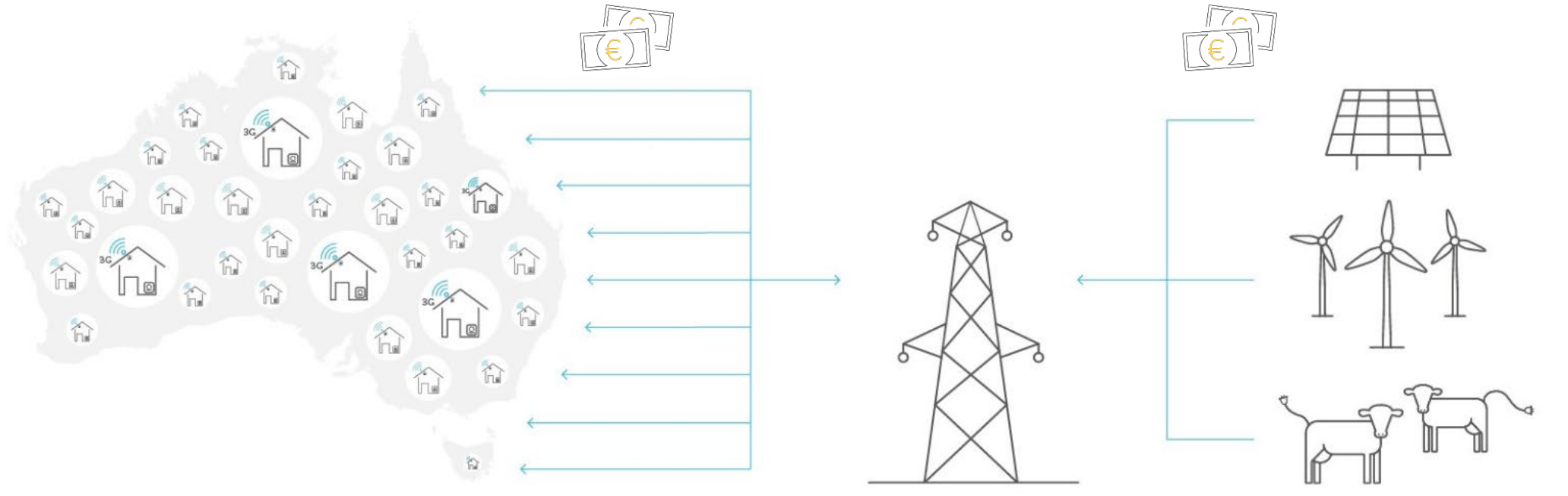
# Electricity retail & sharing platform.

0 Dollar  
electricity  
bill!



sonnenCommunity.

# How it works.



Virtual storage pool

Import and export for  
grid stabilization  
and spot arbitrage

Renewable Energy

sonnenCommunity.  
Electricity tarif.

## sonnenFlat






### sonnenFlat\*

For owners of a photovoltaic system with sonnenBatterie from 8kWh

from 0 Cent/kWh

from \$ 42  
Monthly fee

\*Already available in NSW, ACT, SA & QLD.  
Soon coming to TAS & VIC.

	sonnenFlat 8	sonnenFlat 10	sonnenFlat 12
Annual energy allowance incl. solar, batterie & grid usage	 7,500	 10,000	 12,500
 Minimum solar (kW)	5	7,5	10
 Minimum usable sonnenBatterie (kWh)	8	10	12
Monthly fee	\$ 42	\$ 52	\$ 62
Annual spend	\$ 504	\$ 624	\$ 744

Monthly fee is excl. GST



sonnenFlat.

# The benefits.

Why does sonnenFlat make economic sense?

- The sonnenFlat monthly fee equals the monthly grid connection fee that you have previously paid.

What if I require more electricity than my yearly allowance?

- The sonnenFlat excess rate is fixed and at least 10% less than the average electricity price in your region.

What else?

- There are no exit fees, no contract term and therefore no lock-in.



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