

ENERGIZING LIFE TOGETHER



REC'S SOLAR MARKET INSIGHT Q3 2015

NOVEMBER 6, 2015

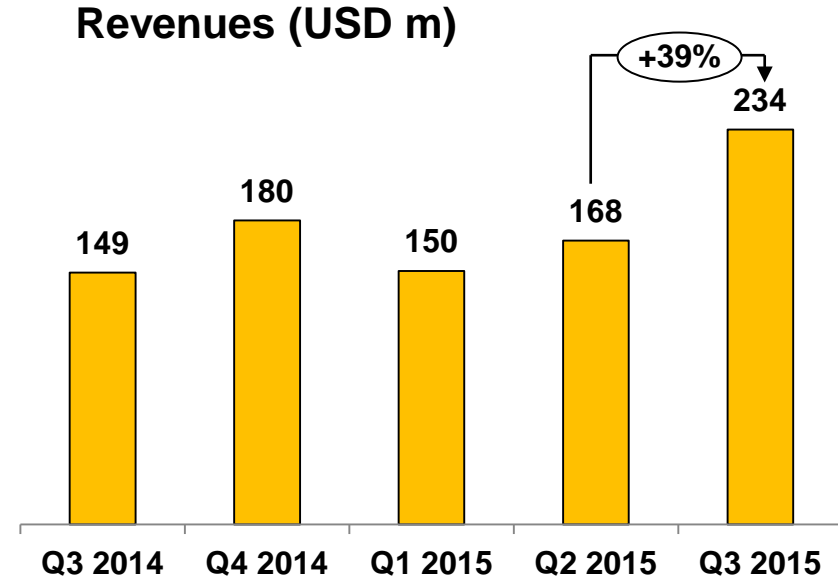


St. Silvester
KINDER GARTEN
Katholische Kirchengemeinde St. Martin

Major highlights from Q3 2015



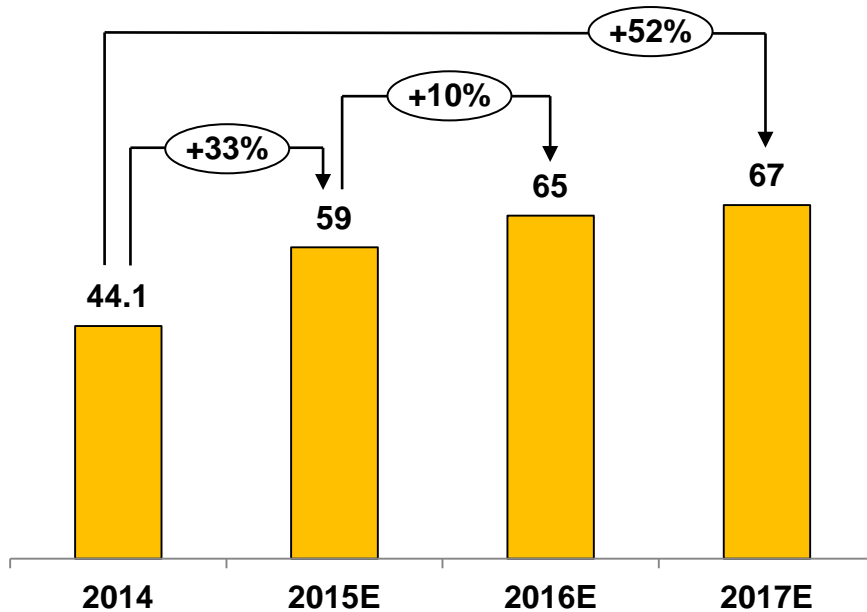
- Record quarterly revenues of USD 234m, up 39% compared to Q2 2015
- All time high quarterly sales of 361 MW demonstrating REC's sustainable growth
- Significant sales volumes of 207 MW to U.S. based on signed major long-term supply agreements, up 59% compared to Q2 2015
- Increased sales volumes in APAC: 45 MW, up 164% compared to Q3 2014
- Strengthened business in Southeast Asia also as a turnkey solutions provider, demonstrated by two ongoing commercial installations in Singapore with new TwinPeak panels
- Increased sales in Europe to 82 MW despite slow markets, up 55% compared to Q2 2015
- REC is increasing its footprint in Middle East and Africa by recently signing a strategic cooperation agreement with Orascom in Egypt



Global solar module demand expected to increase by over 33% in 2015



Global module installations (GW)



Source: IHS 2015, REC forecast

- Driven mainly by growth in U.S. (~30% from 2014) and China (~40%), global module installations in 2015 are expected to reach 59 GW – an increase of 33% compared to 2014
- REC expects annual global module installations to reach around 65 GW in 2016, an increase of 10% from 2015
- By 2017, demand is forecast to increase by 52% compared to 2014
- Asia (in particular China, Japan and India) continues to be global leader with over 60% market share
- U.S. is forecasted to hit second place in 2016 but might decline in 2017 if ITC cuts are confirmed

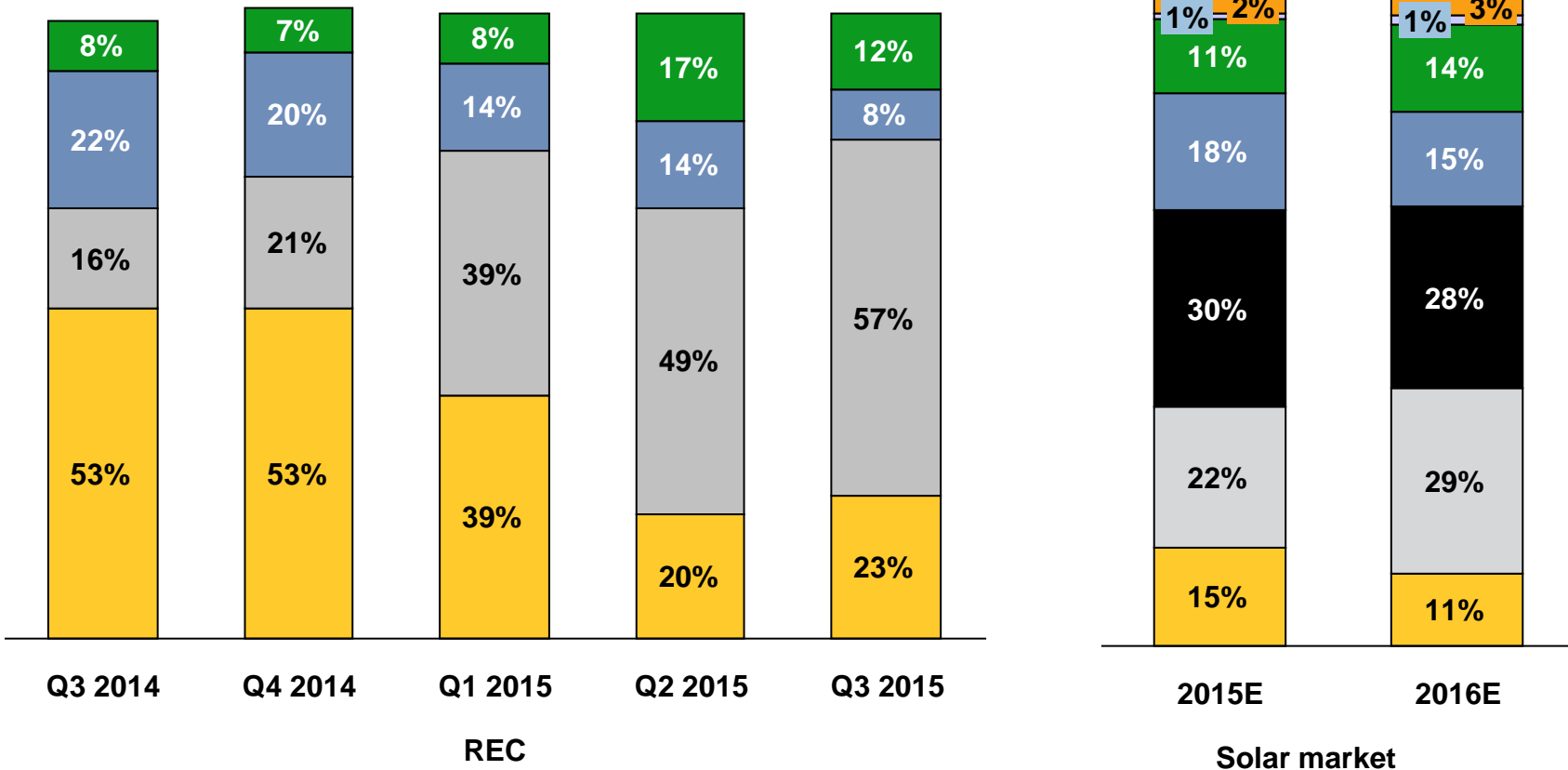
REC regional sales split versus solar industry – Global



Geographical sales split

■ Europe
 ■ Americas
 ■ China
 ■ Japan
 ■ APAC

■ Middle East
 ■ Africa

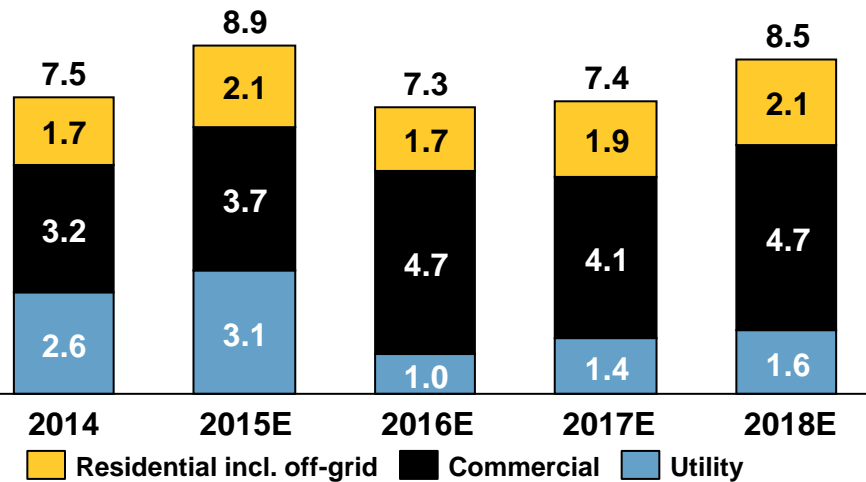


Source: IHS 2015, REC

REC sales and market development – Europe



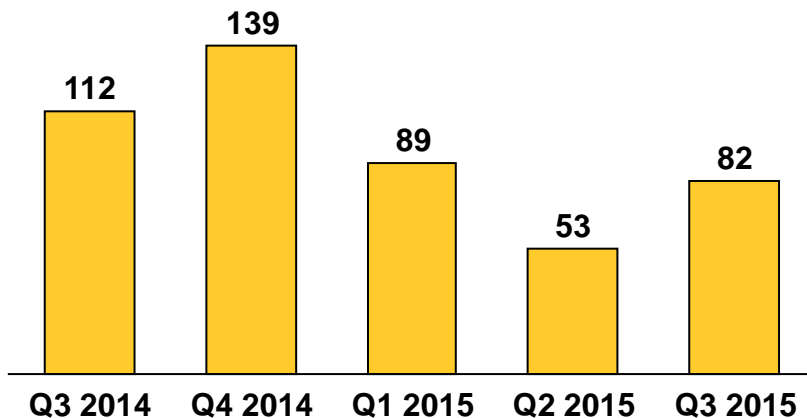
Annual module installations in Europe (GW)



Residential: <10 kW, Commercial: 10 kW–5 MW, Utility: >5 MW

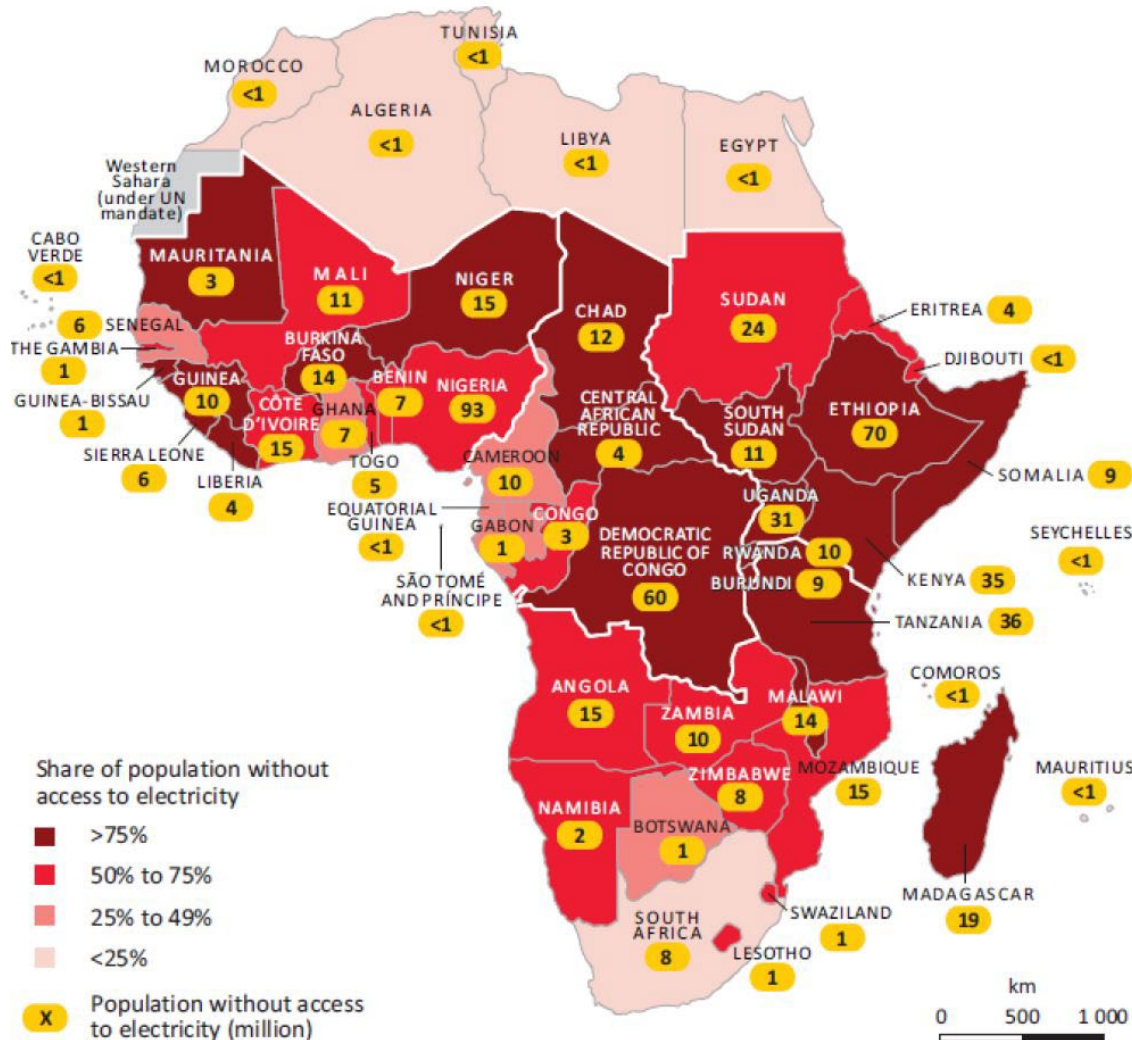
Source: IHS 2015

REC sales development in Europe (MW)



- REC expects more conservative market developments for 2015/2016 at ~7 GW due to slower markets mainly in Germany and UK
- From 2017, REC expects stronger residential and commercial markets due to storage opportunities – 8 GW in 2017, 10 GW in 2018
- Recently announced plans in UK to cut generation tariffs by 87% as of January 1, 2016 are causing uncertainties
 - REC hopes that the government’s final conclusion will be more considerate to protect solar as an innovative industry
 - In case of confirmed cuts, REC expects the C&I rooftop segment to be less impacted and EPC business to be able to switch from utility to commercial installations
- REC is increasing its footprint in MEA through signing strong partnerships, e.g. O Capital, a fully owned subsidiary of OTMT

Driver for solar in Africa is access to electricity



- ➔ REC will seek to penetrate new markets in Africa by setting up new regional sales forces
- ➔ 620m people do not have access to electricity
- ➔ Sub-Saharan, by 2040:
 - Economy: x4
 - Population: x2 (1.75b people)
 - Energy demand: +80% (385 GW). Half of new capacity to be renewable energy
 - Total annual power investments: USD 46b (half electricity generation)
 - 950m people gain access to electricity (70% of those living in rural area by mini-grid or off-grid system)
 - By 2040: 530m people still with NO access to electricity

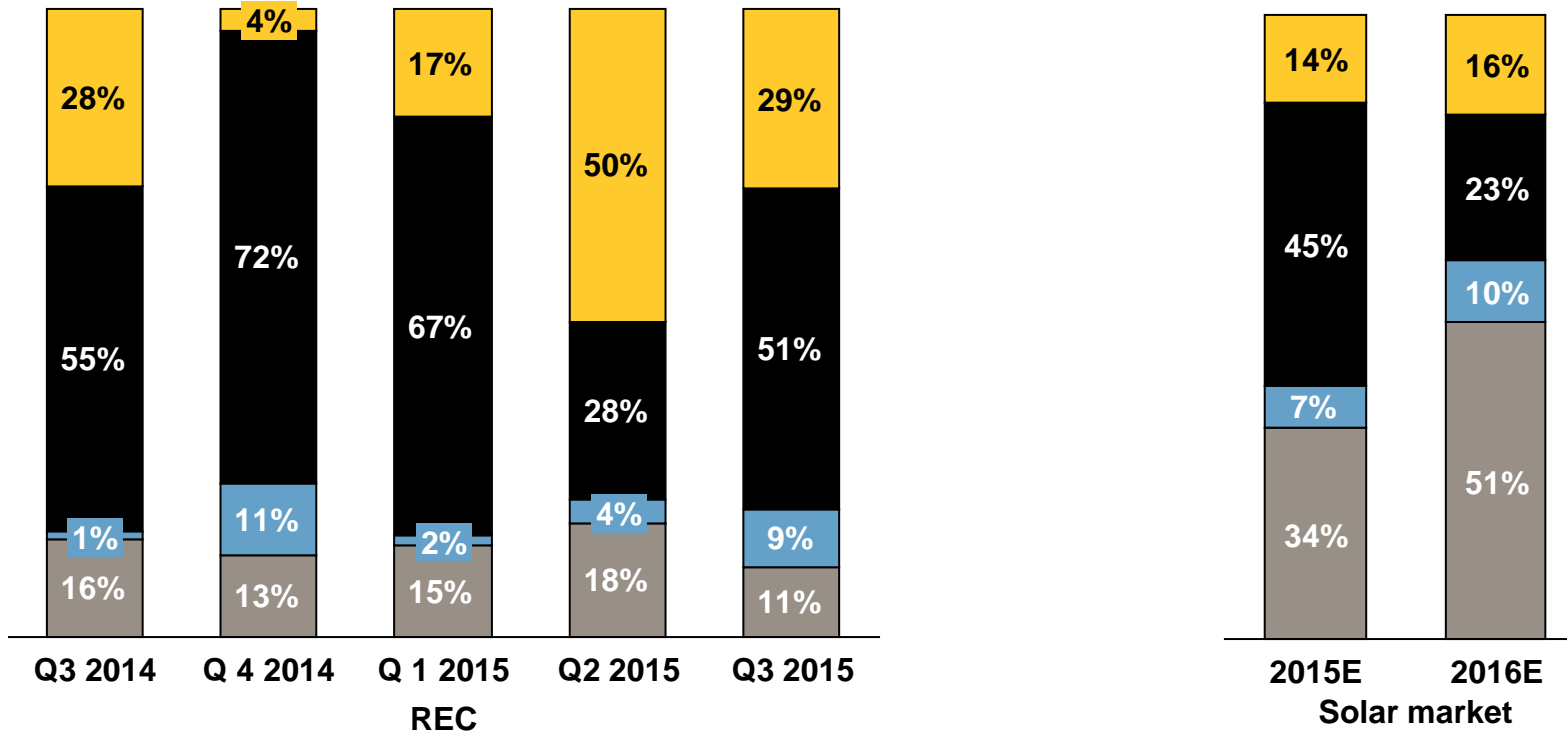
Source: IEA, Africa Energy Outlook, 2014

REC country sales split vs. solar industry – Europe



Percentage of regional MW sales in Europe

Germany UK Benelux Other



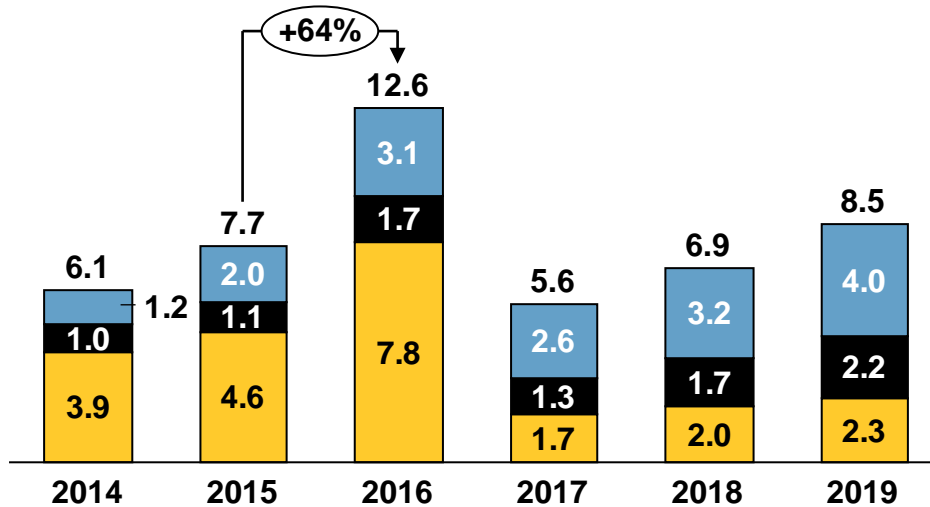
Source: IHS 2015, REC

- ➔ EU Prosun requested on September 4, 2015 an expiry review of the current MIP measures
- ➔ Even with no MIP in place after December 7, 2015, REC expects AD tariff to be in place
- ➔ In general, REC appreciates open and fair market conditions

REC sales and market development – U.S.



Annual module installations in the U.S. (GW)

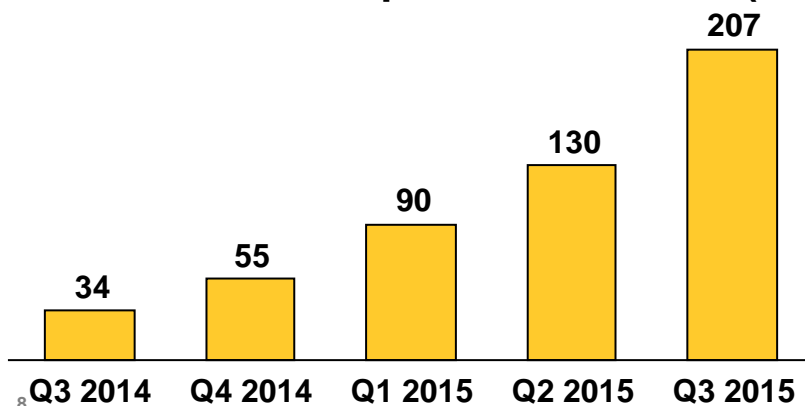


■ Residential incl. off-grid
 ■ Commercial
 ■ Utility

Residential: <10 kW, Commercial: 10 kW–5 MW, Utility: >5 MW

Source: GTM 2015

REC sales development in the U.S. (MW)



- The U.S. market is expected to grow by over 60% from 2015 to year 2016
- In 2017, the market for utility and large commercial segments will slow down if ITC cuts are confirmed
- Stable progress for residential and small/mid-scale commercial expected
- REC has strengthened its position in the U.S. through several long-term supply agreements
- Nearly 60% of REC's total sales in Q3 2015 are to the U.S.

Impact of two potential U.S. ITC scenarios

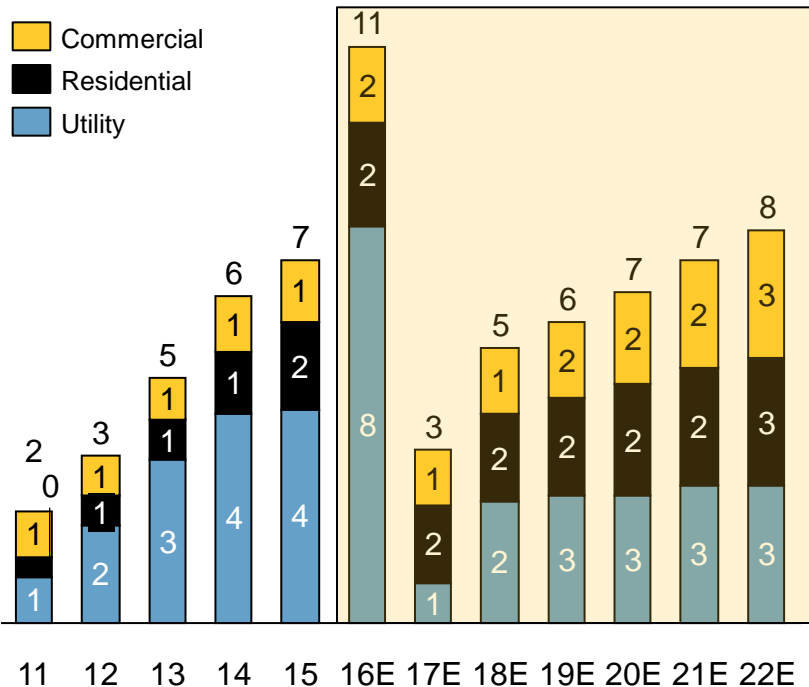


Expiration per current policy

- ➔ 30% personal and business tax credits step down to 0% and 10% respectively for projects commissioned in 2017 onwards
- ➔ U.S. adds **54 GW** between 2015 and 2022

U.S. solar PV build

GW

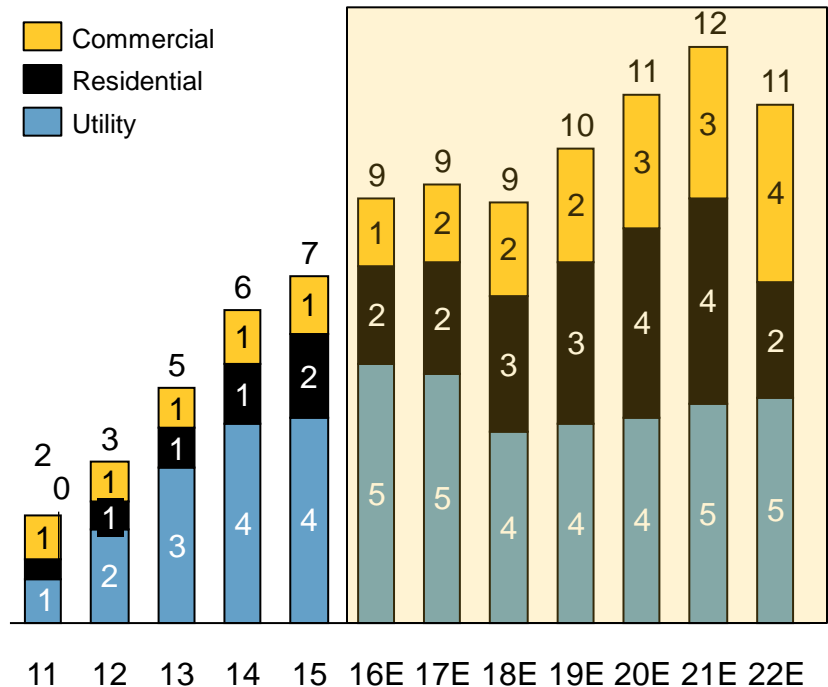


5 year ITC extension

- ➔ ITC is extended to year-end of 2021
- ➔ Timing of extension is summer 2016
- ➔ U.S. adds **76 GW** between 2015 and 2022

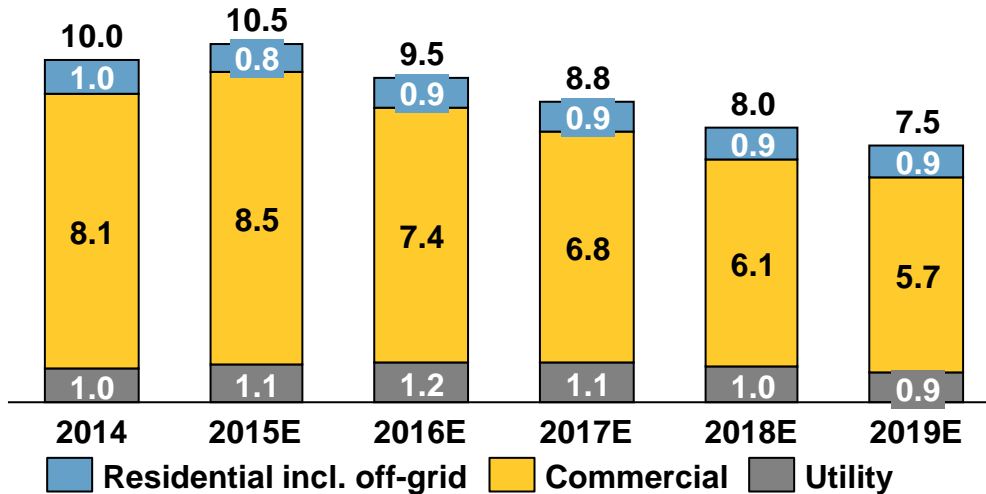
U.S. solar PV build

GW



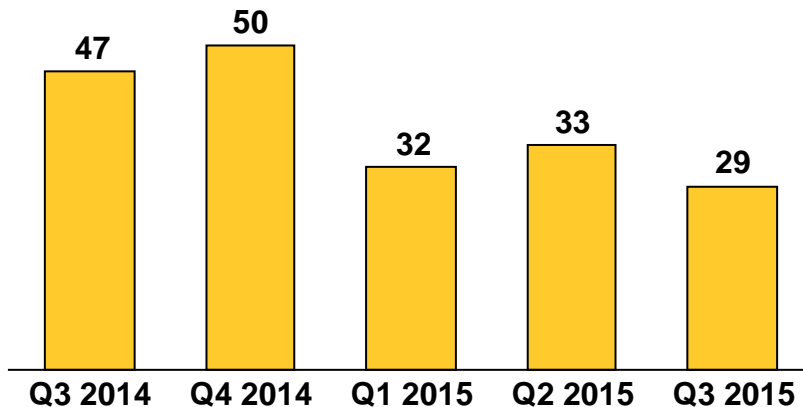
Source: BNEF and SEIA

Annual module installations in Japan (GW)



Residential: <10 kW, Commercial: 10 kW–5 MW, Utility: >5 MW
 Source: IHS 2015

REC sales development in Japan (MW)

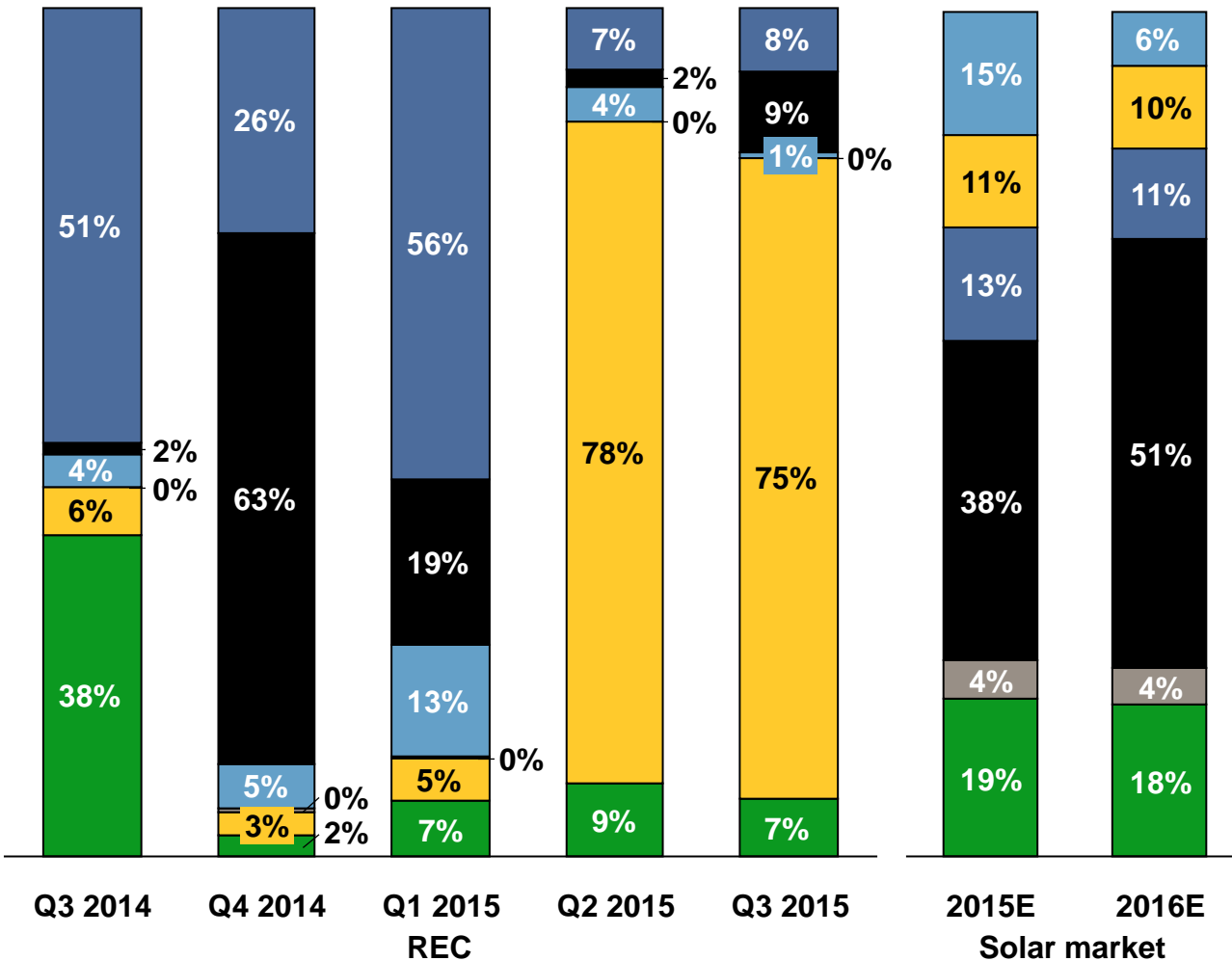


- Japan will be the second largest market in 2015, with forecast to install 10.5 GW
- Mega-solar installations (>1 MW) expected at around 4.6 GW in 2015
- Commercial installations with 10-50 kW expected at 3.7 GW in 2015
- Although new FiT for residential systems reduced by 5.4%, continually declining system prices can maintain project ROI – residential installations expected relative stable at around 1 GW
- On a long-term perspective, the government intends to develop solar generation as an energy source at a measured speed

REC country sales split vs. solar industry – APAC

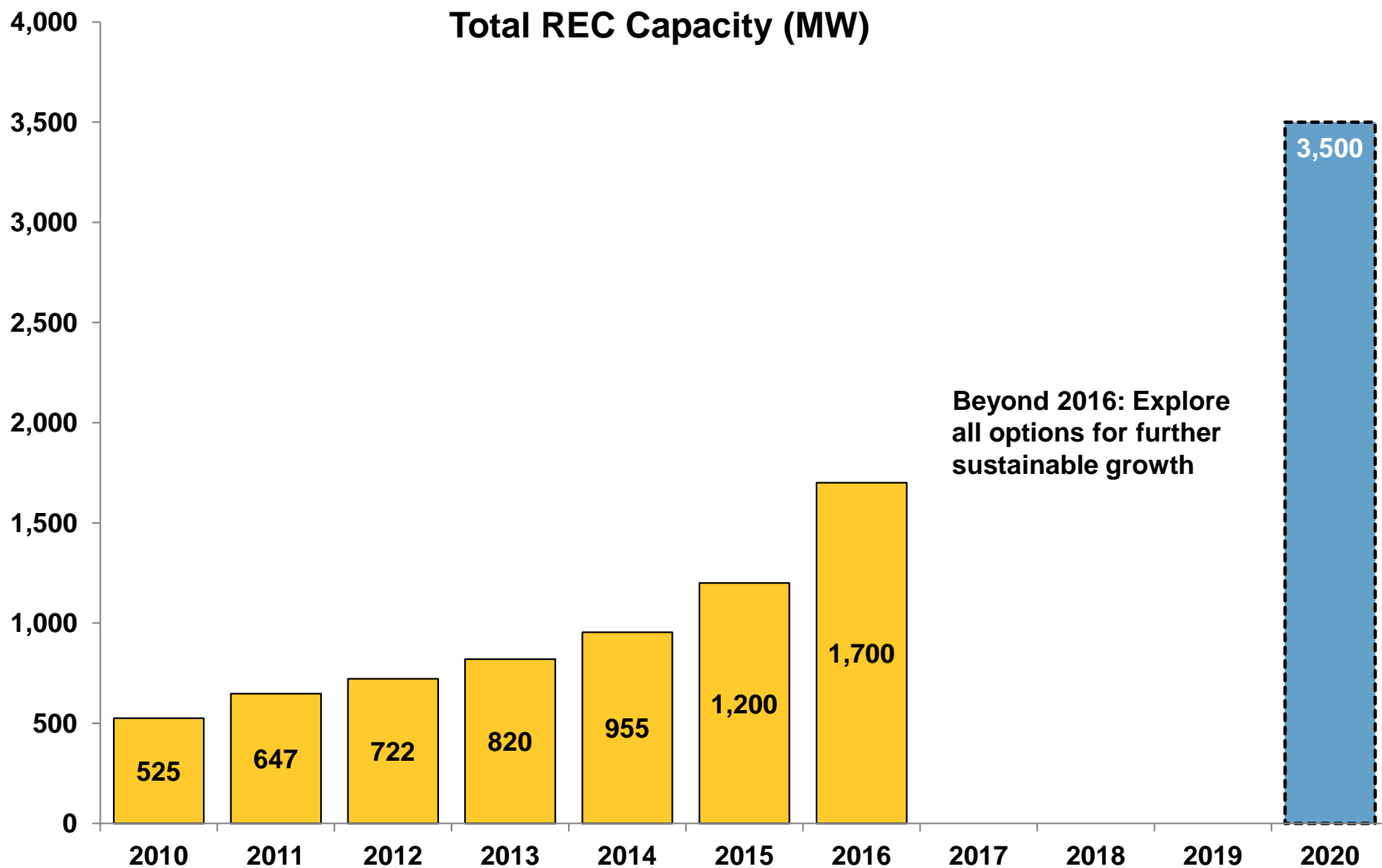


■ Australia
 ■ India
 ■ Korea, Rep of
 ■ Philippines
 ■ Thailand
 ■ Other



- REC increased sales from 17 MW in Q3 2014 to 45 MW in Q3 2015
- APAC is a very opportunistic region, driven by political regulations, such as those in Thailand
- REC secured supply agreements in Thailand of 34 MW in Q3 2015 for utility scale projects as part of a new governmental program

2015: Completed CAPEX expanding capacity by 300 MW
2016: Further increase of total capacity to 1.7 GW



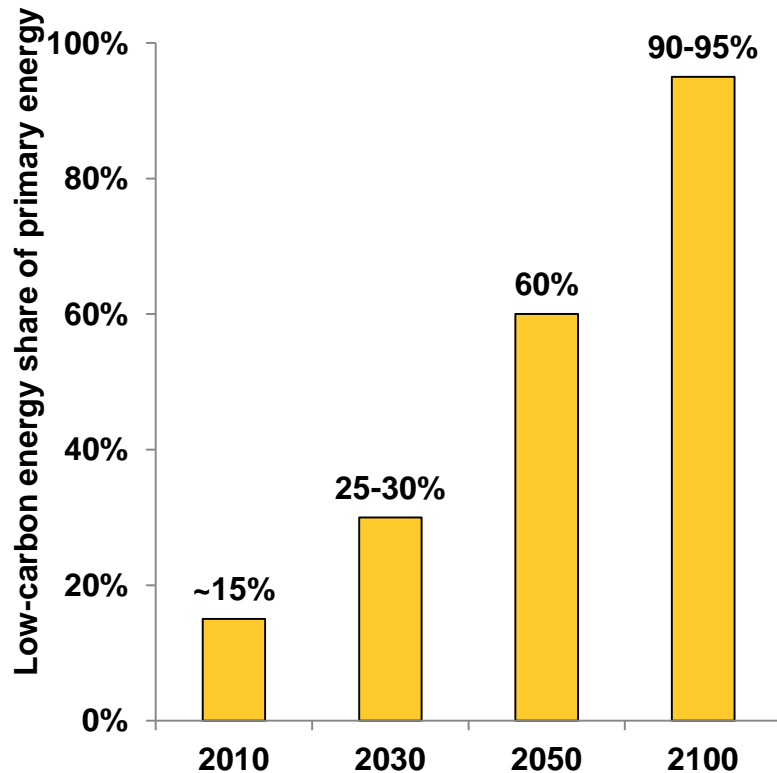


- Continue capacity expansion up to 1.7 GW by end of 2016
- Further expand production capacity for REC's new award-winning product, TwinPeak
- Strengthen REC's global position to further balance market developments
- Increase REC's position in emerging markets by providing high-end turnkey solutions and know-how transfer
- Leverage on solar's momentum resulting from UN Climate Change conference, COP21

Strong commitment at COP21 and higher push for solar expected



Associated required upscaling of low-carbon energy supply



Source: IPCC Synthesis Report 2014

- To limit temperature increase to 2°C compared to pre-industrial levels, a significant upscaling of low-carbon energy supply is required
- REC expects a strong agreement at UN Climate Change conference, COP21, based on submitted ambitious national targets in advance:
 - **USA:** Generating 20% of its electricity from renewable sources by 2030 (2014: 13%)
 - **EU:** Share of renewables in the electricity mix at least 45% by 2030 (2014: 21%)
 - **Japan:** Renewables within electricity mix ~22-24% by 2030, solar targeted at ~7.0%
 - **India:** about 40% cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030
- A strong agreement will open a bright long-term perspective for solar, likely above actual forecasts