

# China Aluminium Industry Picture

**Mo Xinda, China Nonferrous Metals Industry Association**

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## Cautionary note

No assurance can be given that the content here of the author's personal view will prove to have been correct for investment.

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# Focus Points

**I. Overview of China aluminium industry**

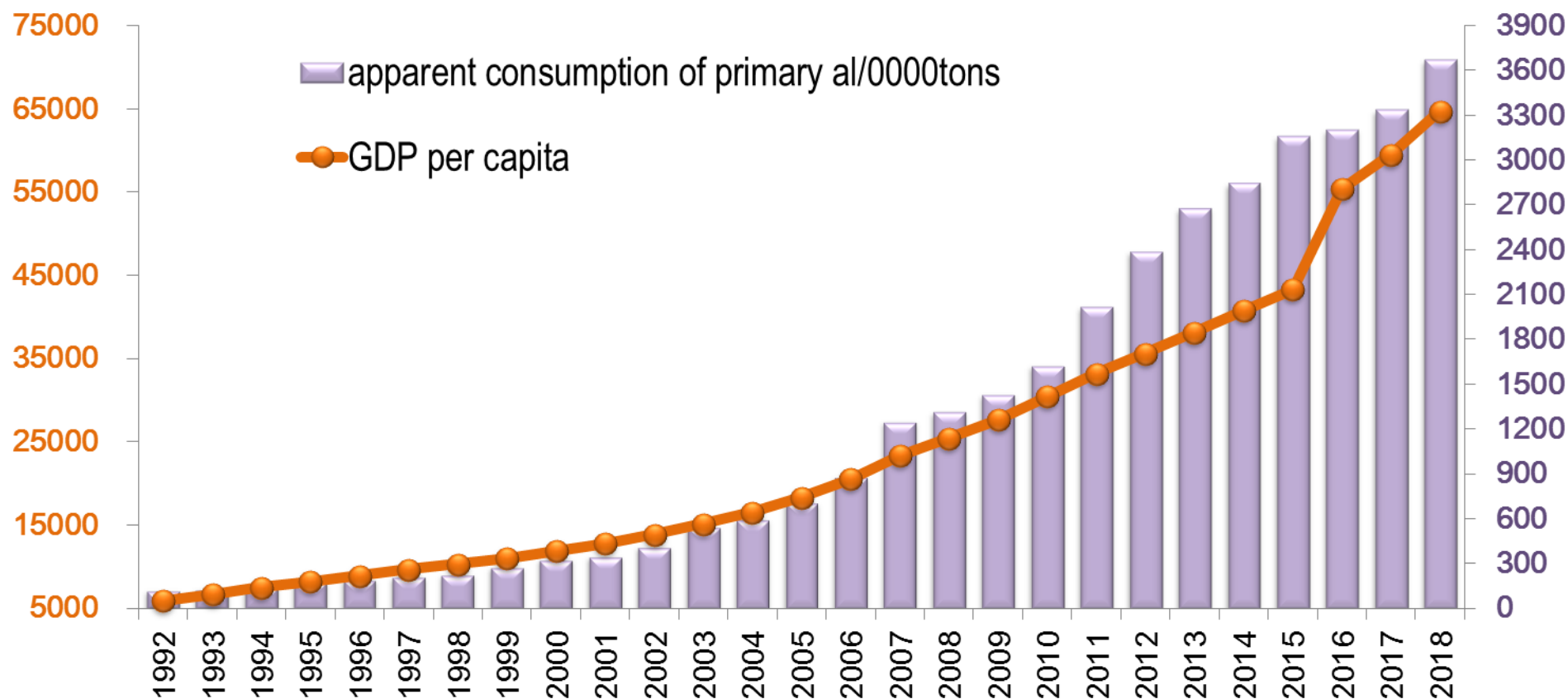
**II. What holds up the future**

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# Overview...

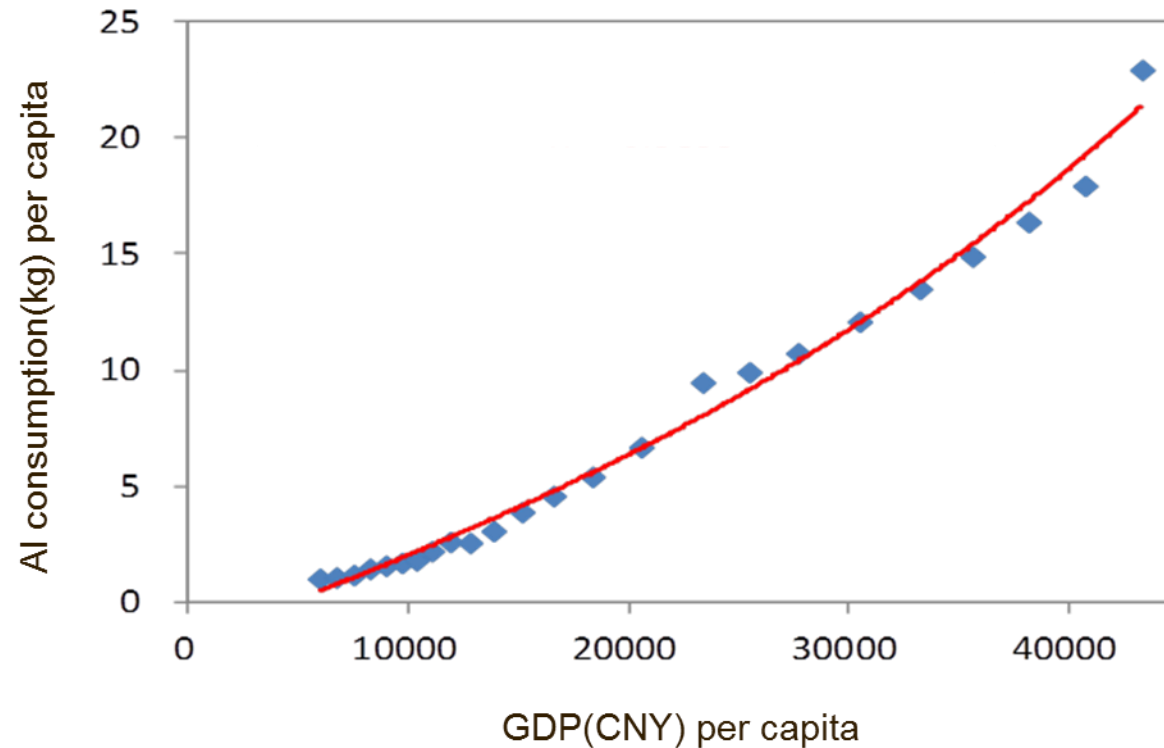
- The development of aluminum industry is mainly driven by economy/demand.



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# Overview...

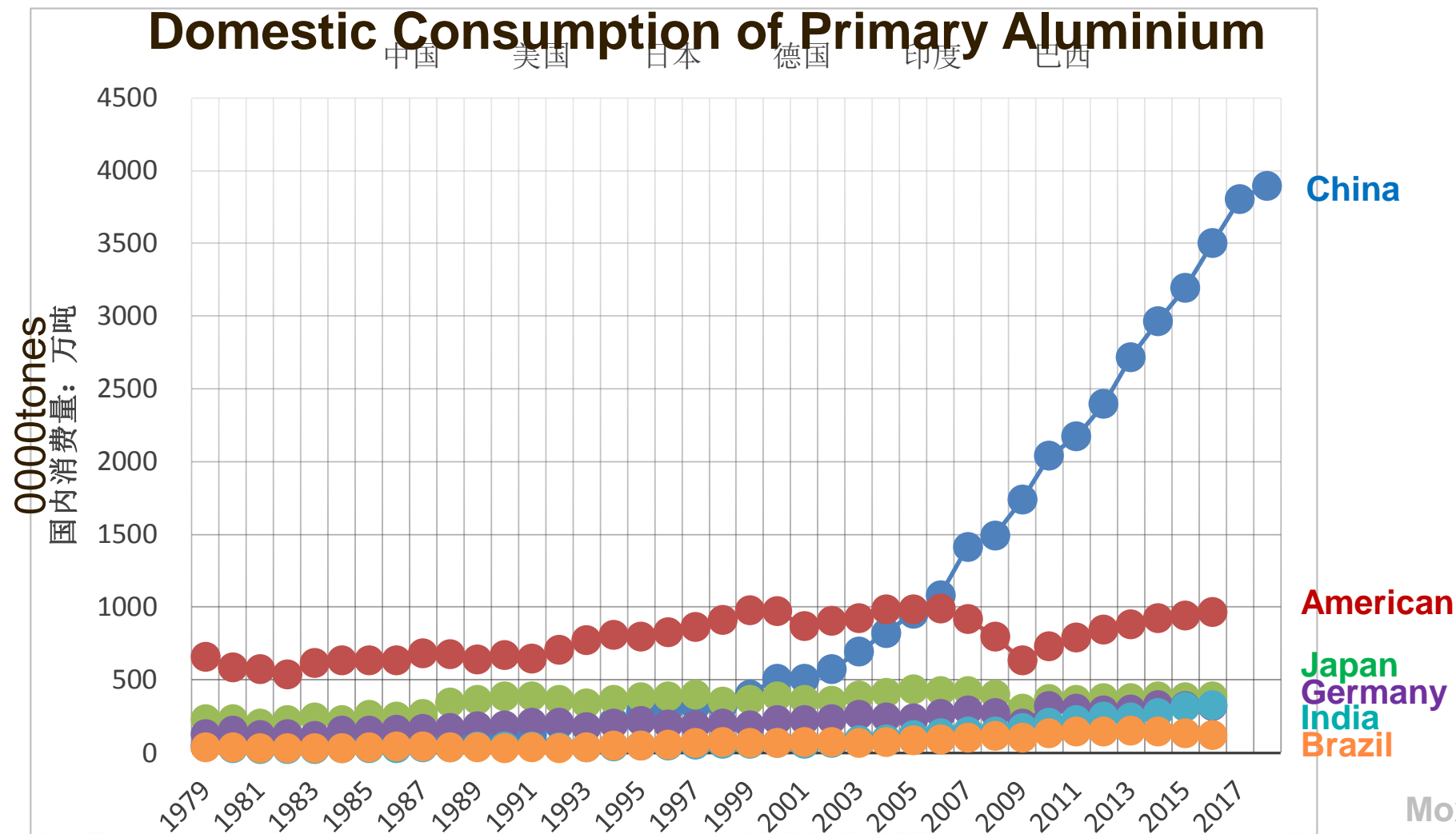


**For every 10,000 CNY increase in GDP, the corresponding increase in aluminium consumption is more than 550,000 tons.**

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# Overview...



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# Overview...

## ● Trend of supply

	Alumina	Primary aluminium	Semis	Secondary Aluminium
Output of 2018, mlt	72.5	36.5	45.5	6.95
2018/2017, %	9.9	-0.2	2.6	3.0
Production Change	Increasing...	Decreasing...	Growth rate decreasing...	Up-trend of output sustain steady...
Supply	Net imp	Net imp	Domestic consumption accounted for more than 90% of output	Net imp
Generally Trend	Supply fcous on domestic demand			

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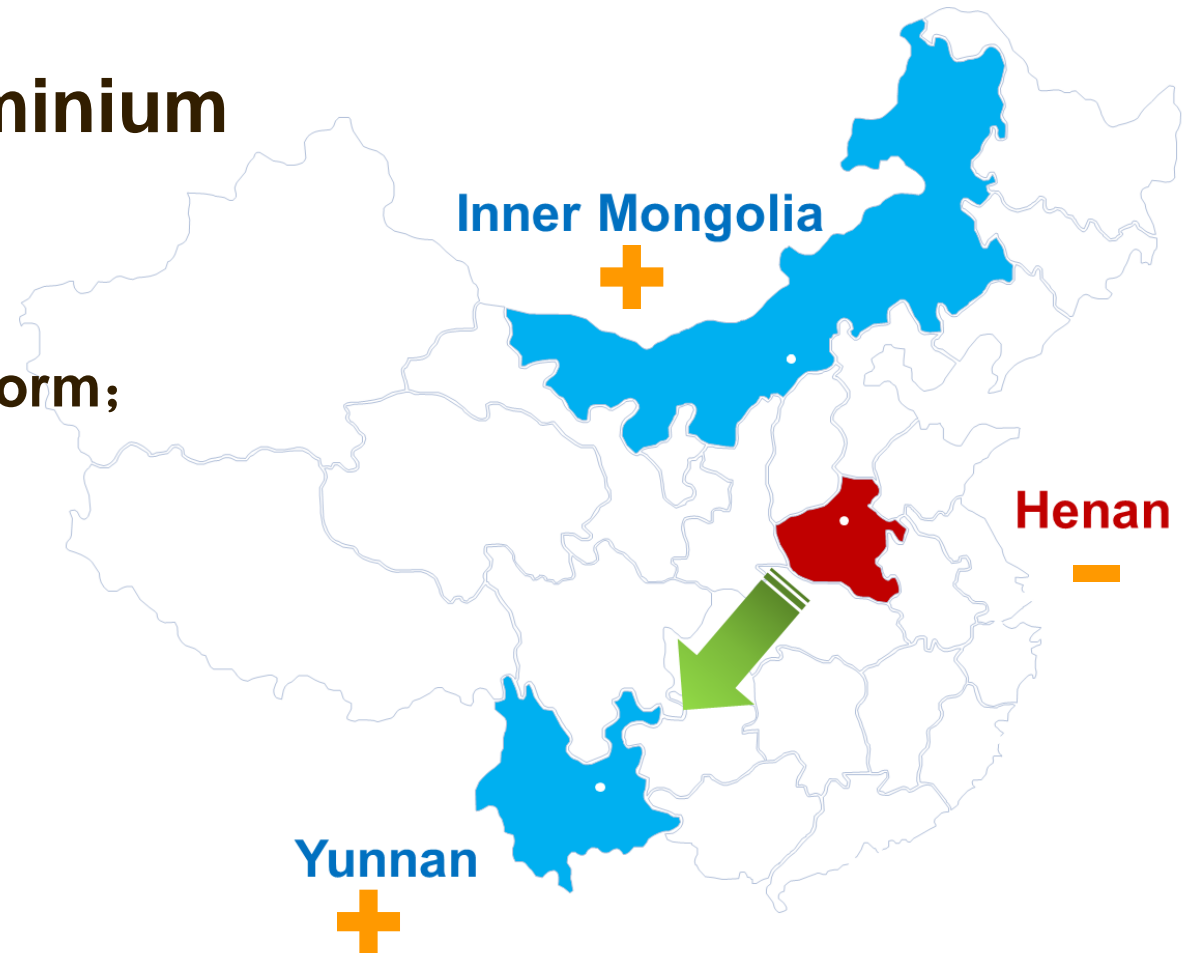
# Overview...

- **Adjustment-Primary aluminium**

Implement of supply-side structural reform;

Setting upper limit of total capacity;

Capacity transfer by replacing...



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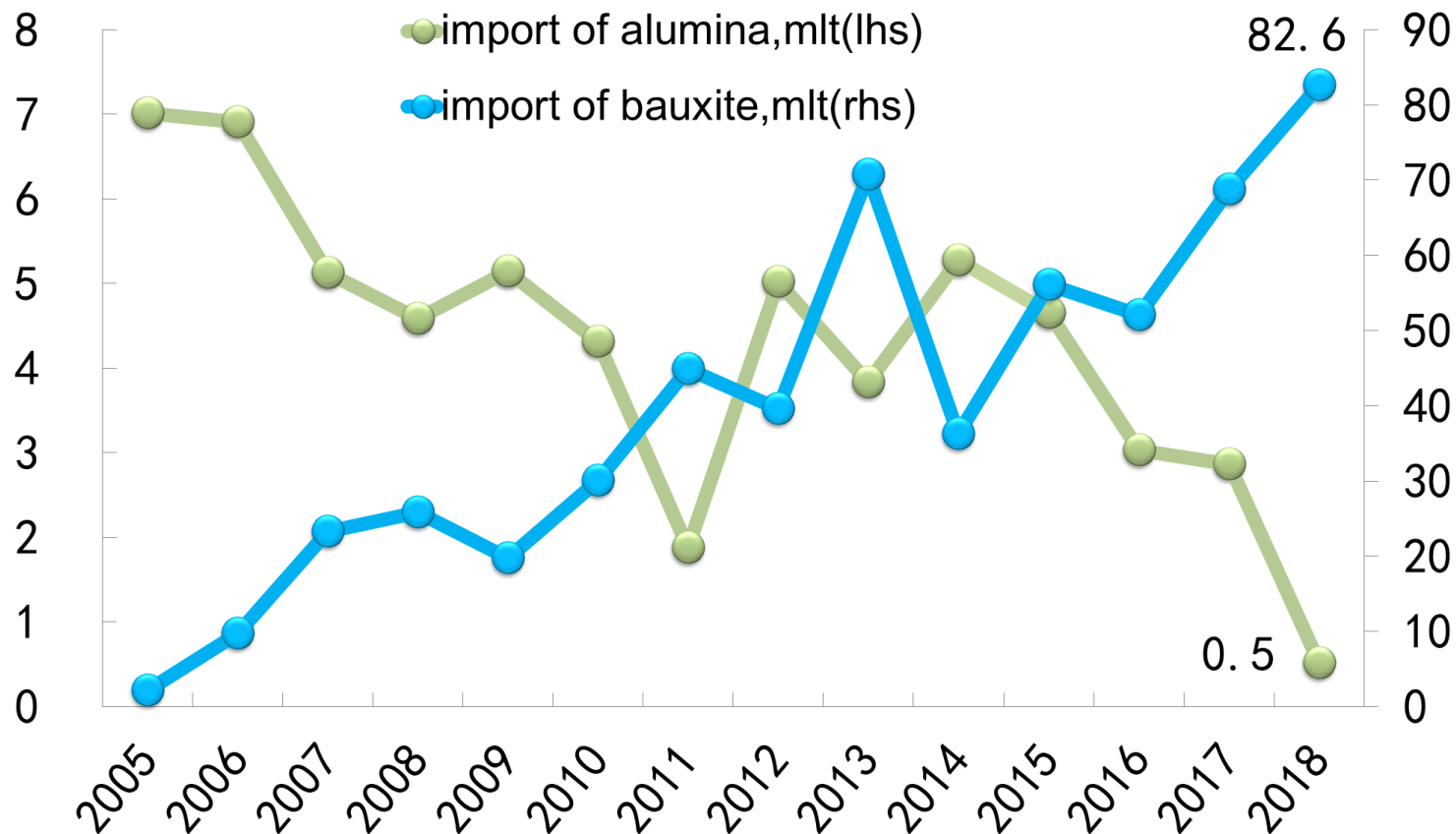
# Overview...

## ● Adjustment-Alumina supply

Import volume of bauxite is increasing, mainly from Guinea...

Import volume of alumina changes with price comparison at home and abroad...

Two resources complement each other, external dependence is likely to remain.



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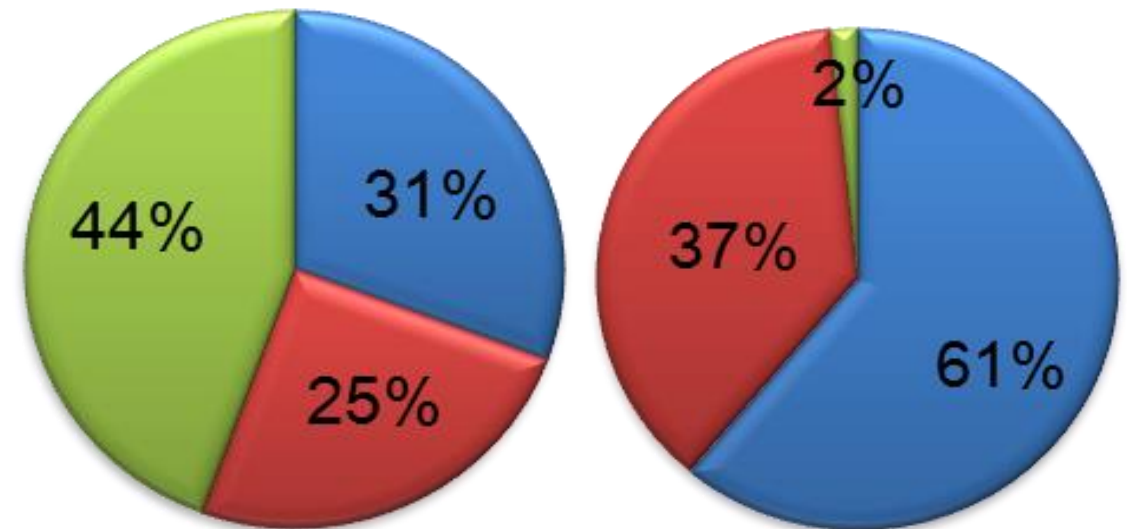
# Overview...

- **Adjustment-Semis supply**

**Distribution:** Liquid aluminum, of either primary or secondary origin, that can be directly consumed by downstream...

**Structure:** The share of extrusion doubled to more than 60%.

■ extrusion  
■ rolled product  
■ others



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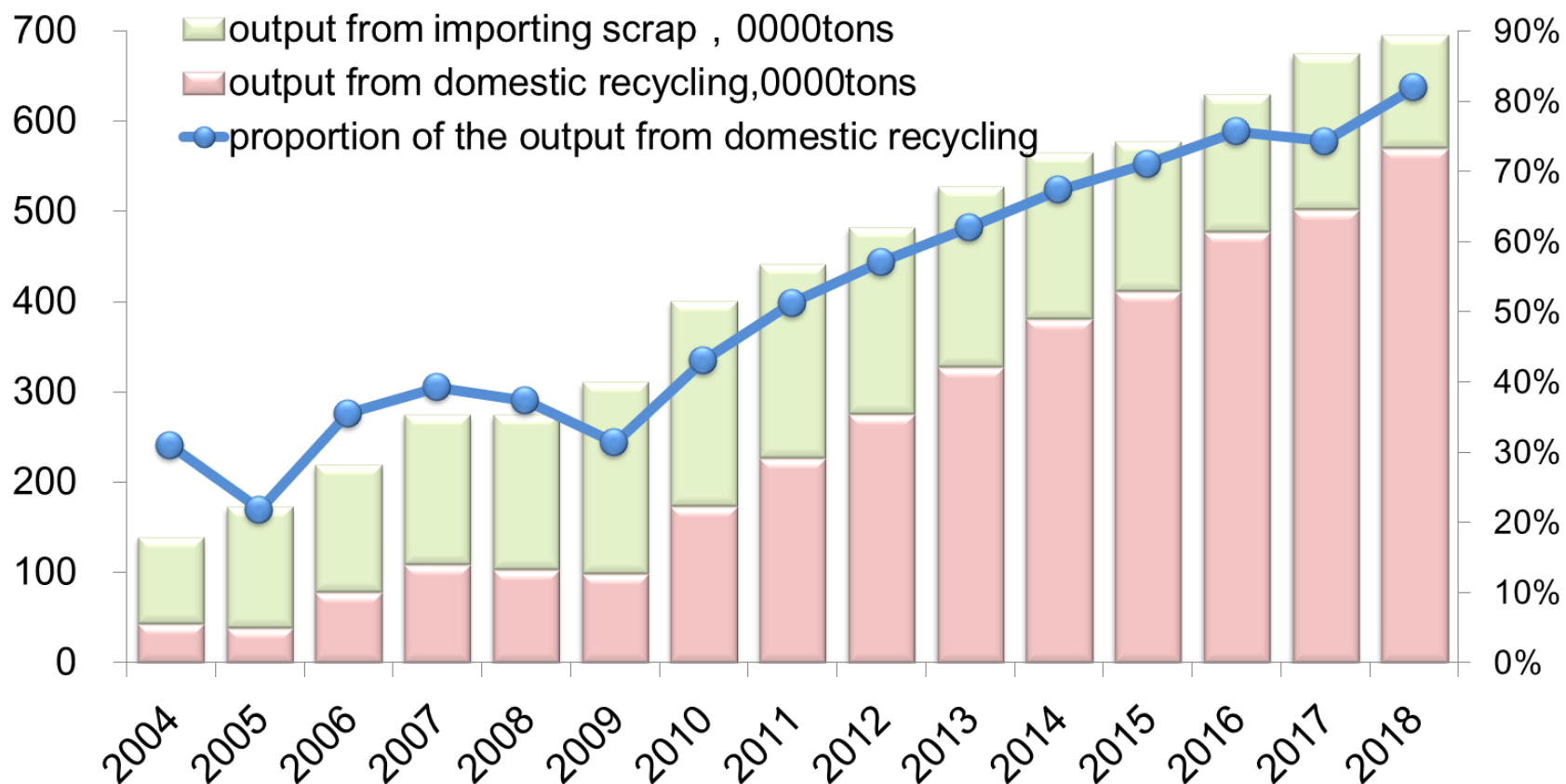


# Overview...

## ● Adjustment-Secondary aluminium supply

**Secondary aluminum accounts for less than 20% of primary aluminum;**

**Domestic recycling keeps on increasing, with CAGR more than 20%.**



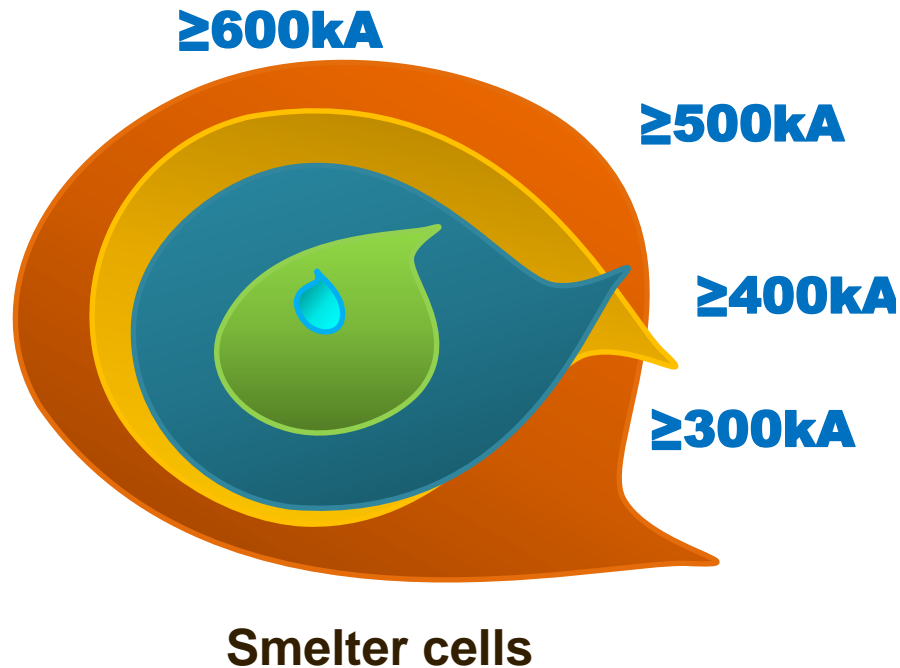
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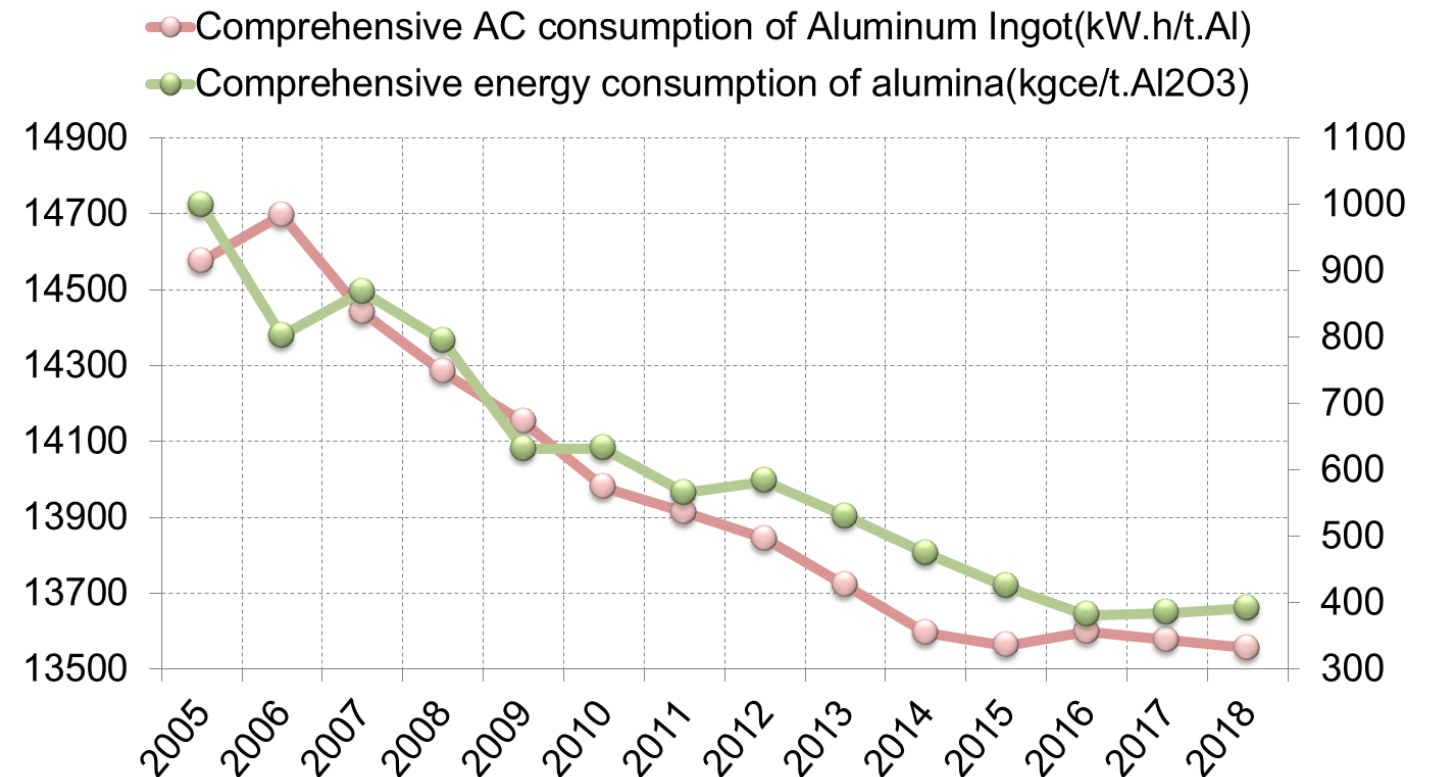
# Overview...

- Equipment & Technology

Facility upgrade



Energy consumption come down





# Overview...

## ● Environmental protection actions on clean production

### SO<sub>2</sub> emission of smelters (unit volume):

- Previous: 200mg;
- Most of : 100mg
- Part of: 35mg

Smelters and refineries should reduce production unless reaching Ultra-high air pollutant emission standard

Strengthen pollutant emission management + Output reduction during heat seasons +...

➤ *Work Plan for Air Pollution Prevention and Control in Beijing-Tianjin-Hebei and the Surrounding Areas (2+26), since 2017*

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# Overview...

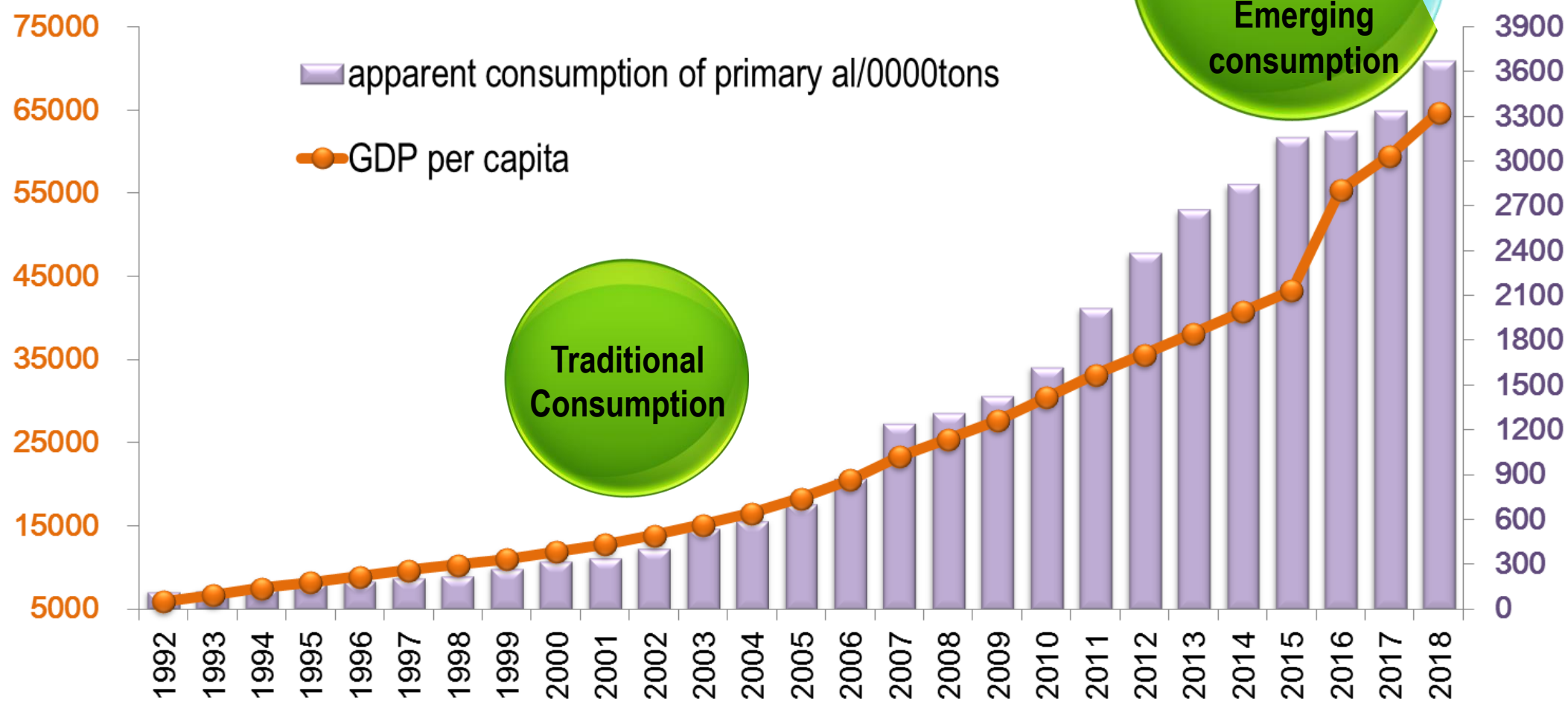
***Promoting Aluminium Applications Story So far***

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# Consumption

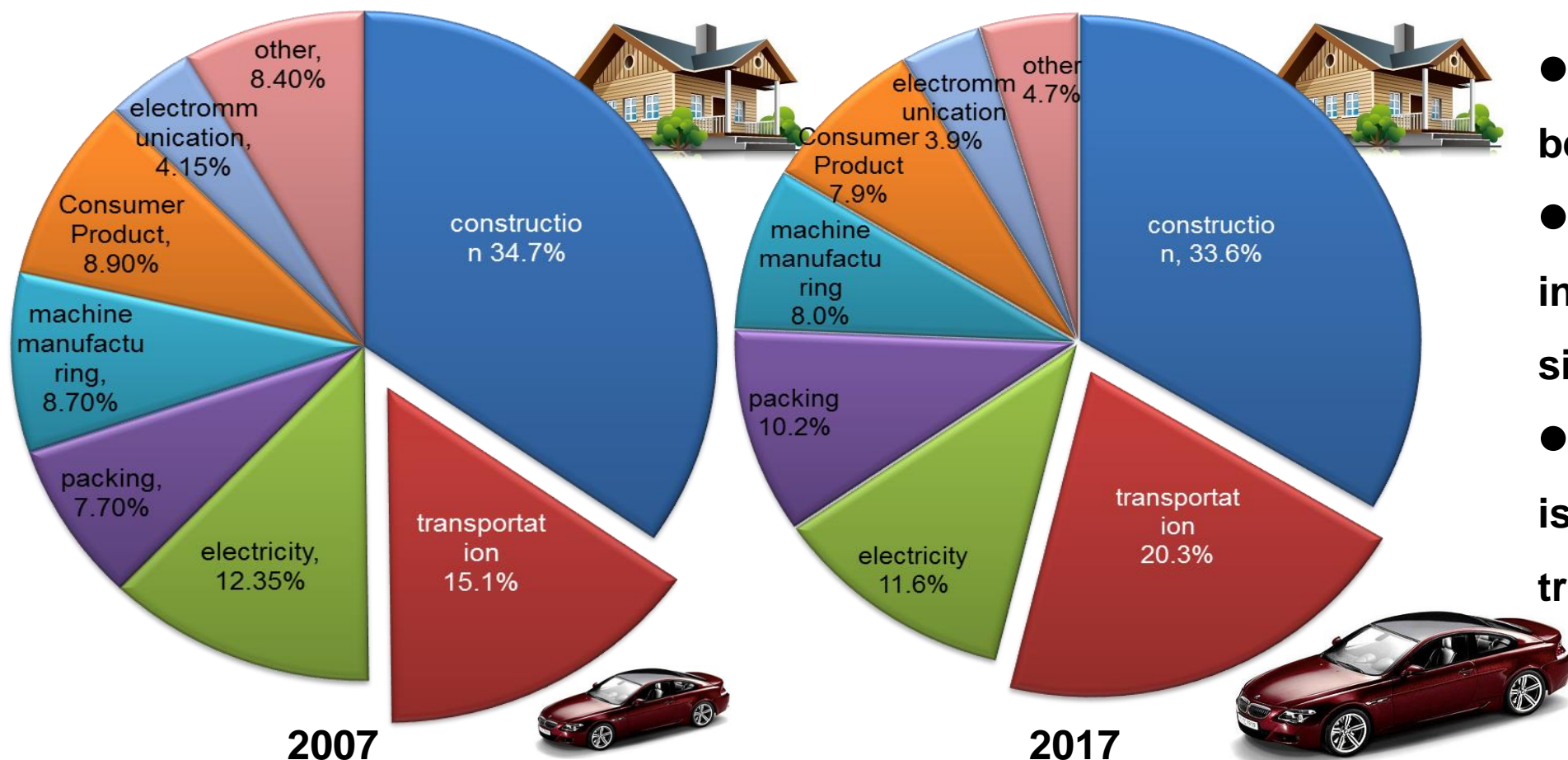


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# Consumption

## Structure of aluminum End Use is adjusting of China



- Construction still to be the largest segment;
- Transportation increased most significant;
- Packing consumption is moving up on the trend ...

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# Consumption

- Year of 2012-aluminium alloy trailers and oil tank trucks

Aluminium consumption: 3-3.5t/unit



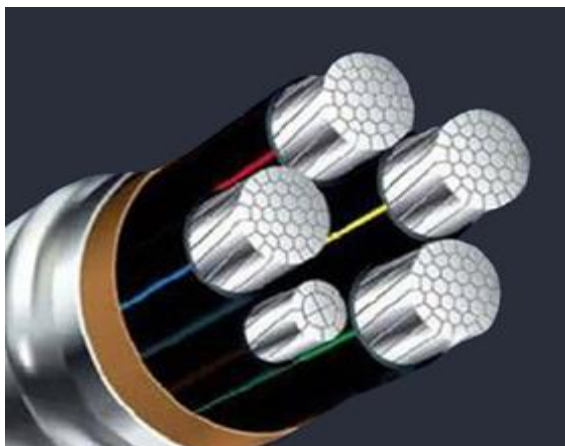
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# Consumption

- Year of 2013-aluminium alloy conductor

Aluminium accumulative consumption: >60000 tons



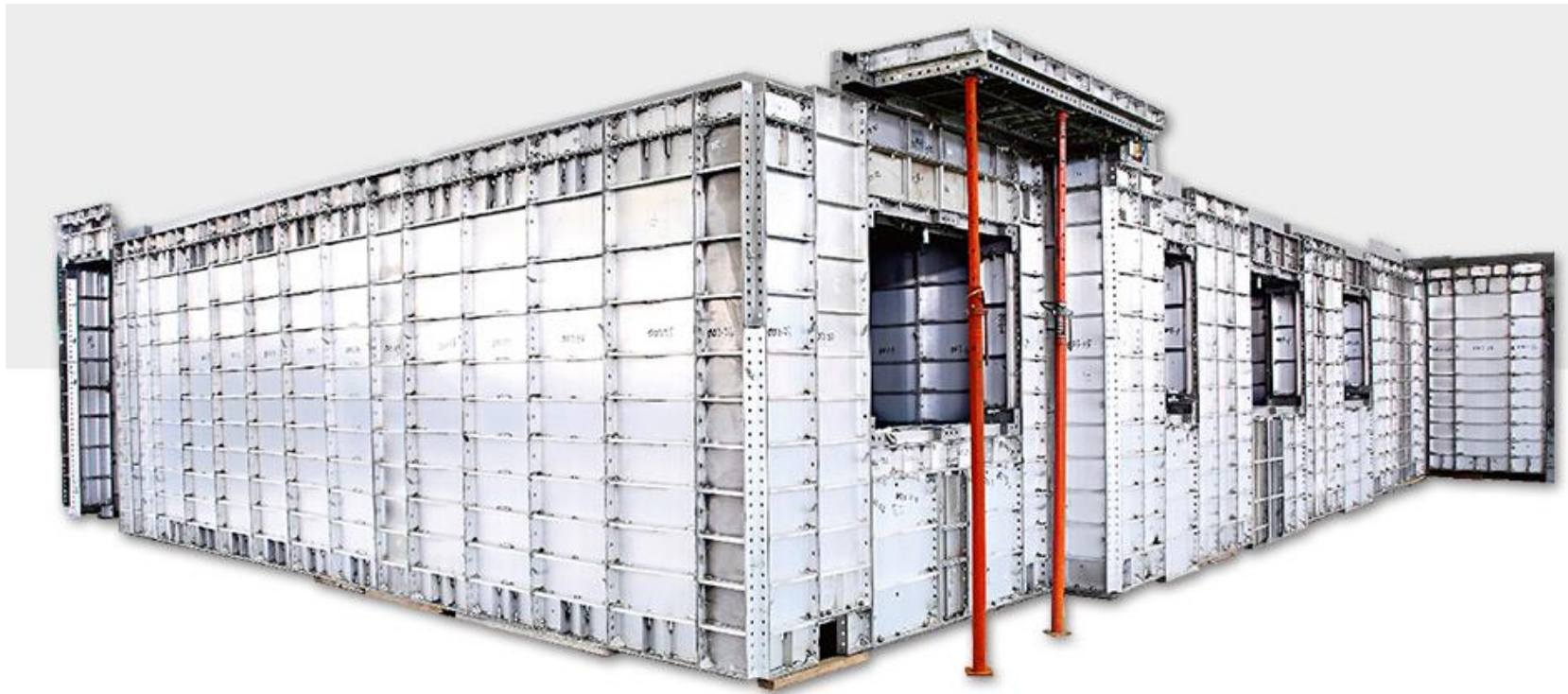
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# Consumption

- Year of 2014-aluminium alloy formwork

Aluminium consumption:  $25\text{kg/m}^2$



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# Consumption

- Year of 2015-aluminium alloy envelop(roofing, wall...)

Aluminium consumption:  $3\text{-}5\text{kg/m}^2$



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# Consumption

- Year of 2016-aluminium alloy body new energy bus

Aluminium consumption: 1-2t/unit



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# Consumption

- Year of 2016-aluminium alloy overpass

Aluminium consumption: around 1t/meter



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# Consumption

- Year of 2017-aluminium alloy furniture

Healthy (formaldehyde-free)+recycling +corrosion prevention +...



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# Consumption

- Up to the end of 2018, accumulated al consumption of new applications was more than 3.5 million tons. (Aluminium alloy formwork is the fastest)



**Next steps? A Green city...**

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# Consumption

Growth is mainly in three respects



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# Consumption

Building integrated photovoltaics (roof, curtain wall, solar power generation, furniture...)



**Constructing  
and building  
waste >40%**

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# Consumption

Electric vehicle (body, curtain wall, solar power generation, furniture...)



Chery eQ1-majority could afford



ES8-96.4% is made of aluminium ( 335kg )



**Rapid growth of  
new energy  
automobile  
demand>60%**

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# Consumption

Refrigerated truck (body, al-air battery...)



**Cold-chain logistics industry in China skyrocket.**  
**(The transaction amount of 2018>\$40 billion)**

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# Consumption

More applications...



0.5kg-al/3kg-case



5kg/5steps-ladder



13 billion plastic dish/year



Street lamp Inventory  
exceed 40 million

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# A gold-idea is invaluable...



**Best choice—Aluminium has significant potential among light materials due to cost competitiveness, social benefit.....,and design.**

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# Thank you!

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