



中国标准化研究院

CHINA NATIONAL INSTITUTE OF STANDARDIZATION

WORKSHOP “NEEDS AND GAPS ON
STANDARDISATION FOR RENEWABLE
ENERGY: ACTIONS TO FACILITATE THE BEST
USE OF STANDARDISATION FOR
RENEWABLES”

24 October 2012, Bonn, Germany

Incorporation of international standards into national regulatory frameworks

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二零一二年十月

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Background

Above 70% electricity in China is produced by inefficient coal-fired power plants. Air and water quality are already pressing concerns, and coal-based energy production exacerbates the pollution, having a major impact on agriculture and health.

China's 12th Five-Year Plan(2011-2015) calls for a country-wide energy efficiency improvement program with a target of reducing energy consumption 16% per unit of GDP by 2015. Striving to meet this goal, the nation's leaders emphasize both improved energy efficiency and renewable energy resources.

Background

China has already had great success with rural renewable electrification. Full rural electrification is planned by 2015, primarily through small hydropower and off-grid photovoltaic and wind installations.

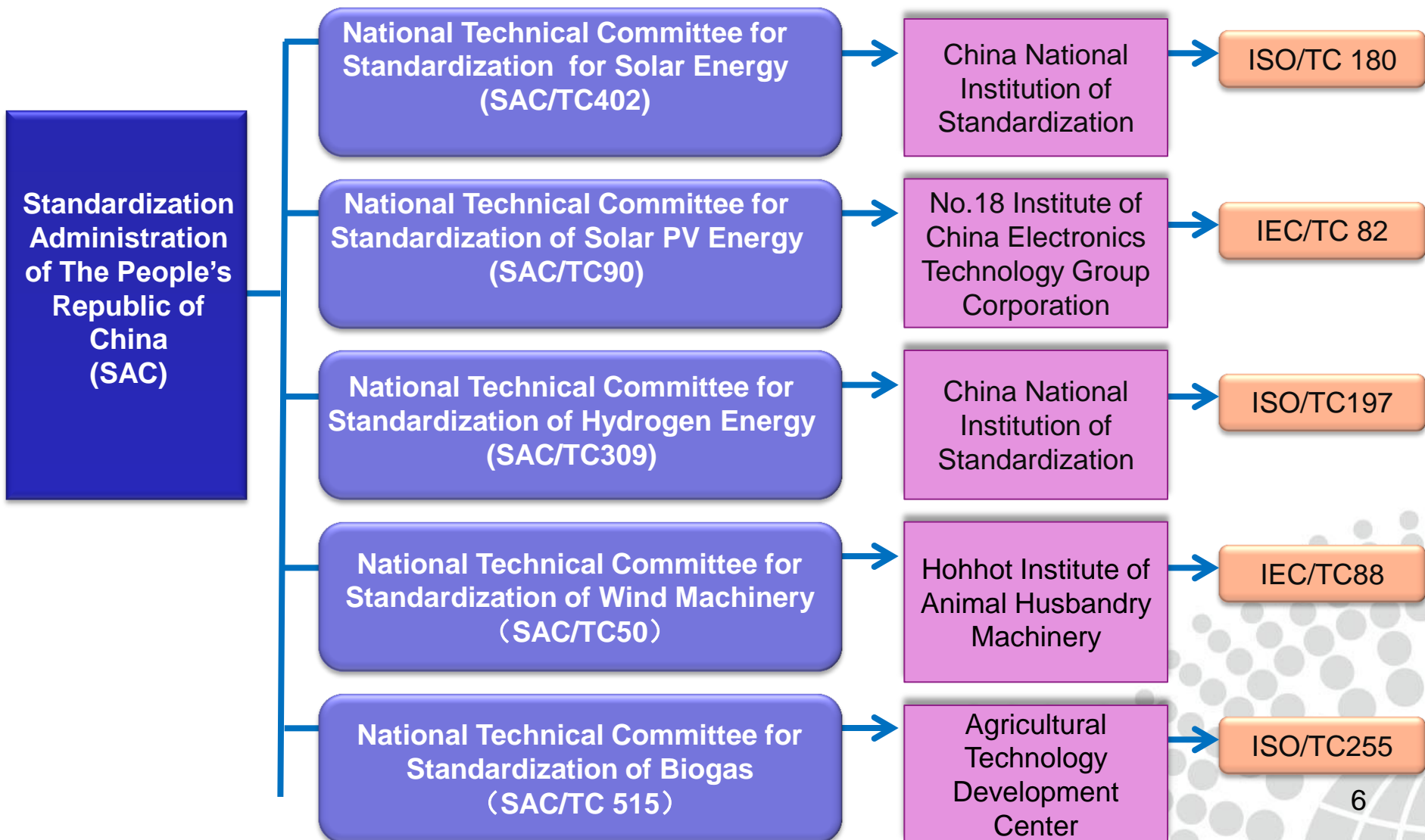
Both domestic and international companies have been attracted to China's rapidly-expanding renewable energy sectors. As the example, wind energy capacity is targeted to reach 30 GW in 2020, which is likely to make China the world's largest wind power producer.

Background

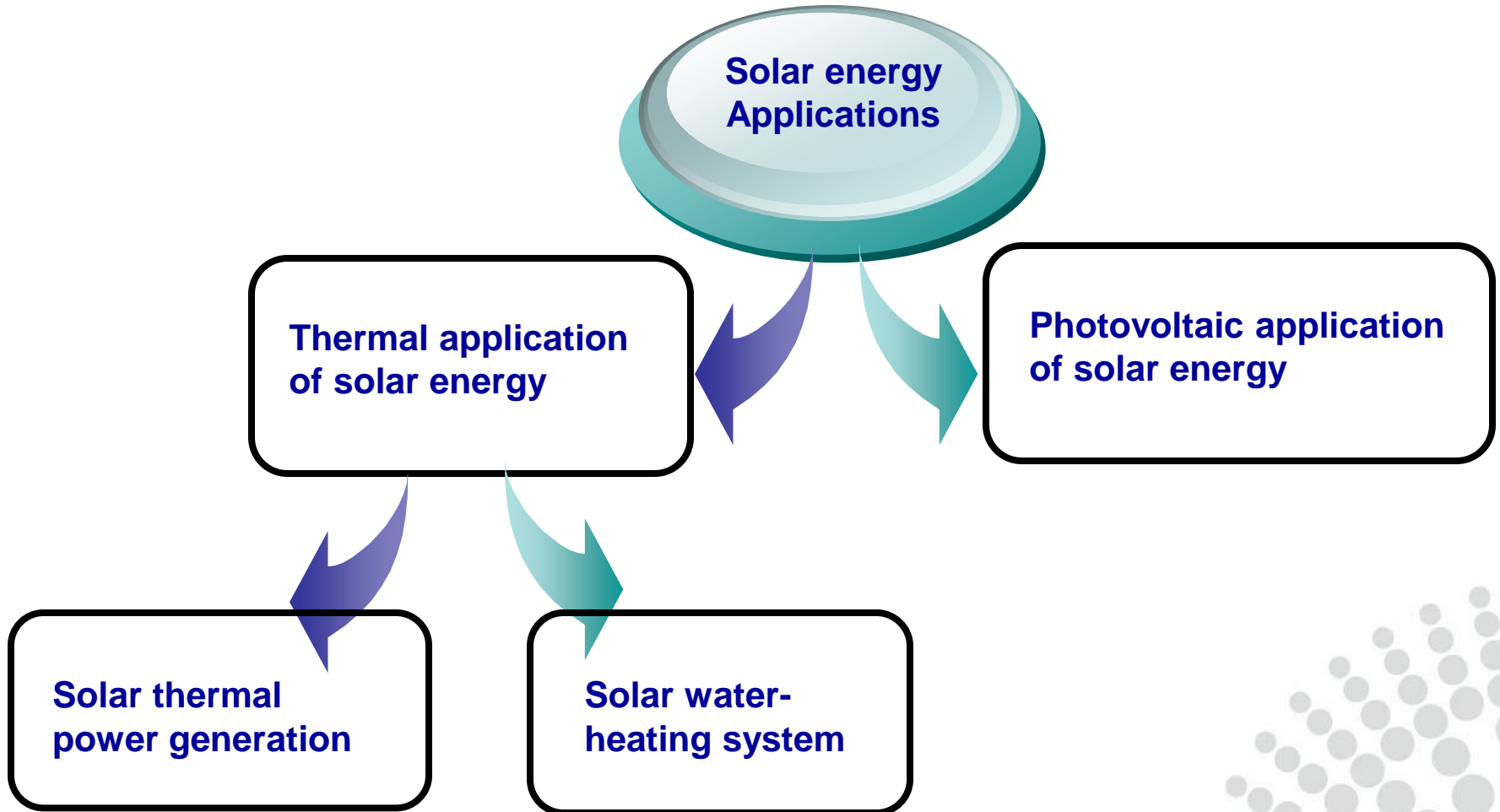
There are major challenges to China's renewable energy development.
The following regulations have been developed :

- ✓ Renewable Energy Law (REL)
 - ✓ China's 12th Five-Year Plan(2011-2015)
- ✓ Renewable energy sector development guideline
- ✓ Renewable energy electrification pool purchase price policy
- ✓ Renewable energy electrification cost allocation policy
- ✓ Special fund for renewable energy development
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Standardization Activities on Renewable Energy

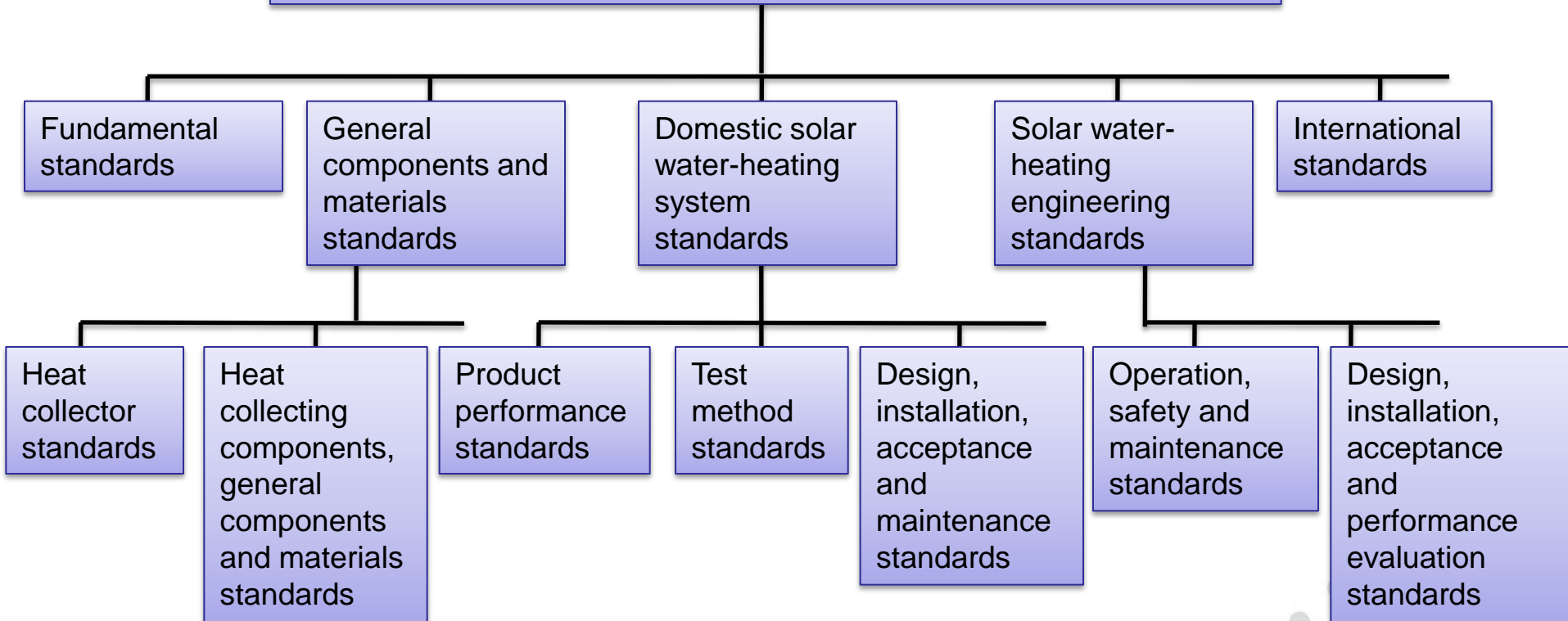


Solar Energy Standardization



Solar Energy Standardization

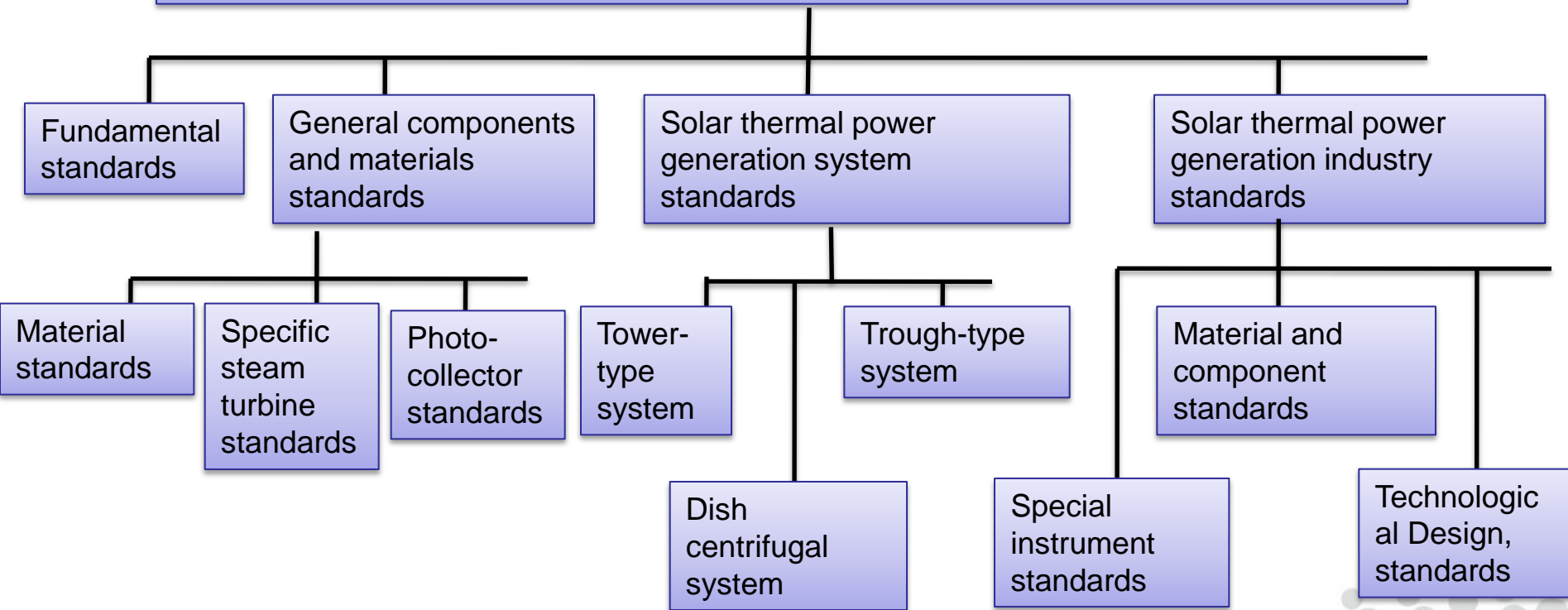
The framework of solar water-heating system standards



35 national standards are promulgated, including: 2 mandatory national standards, 33 recommended national standards. And 7 related standards are under development.

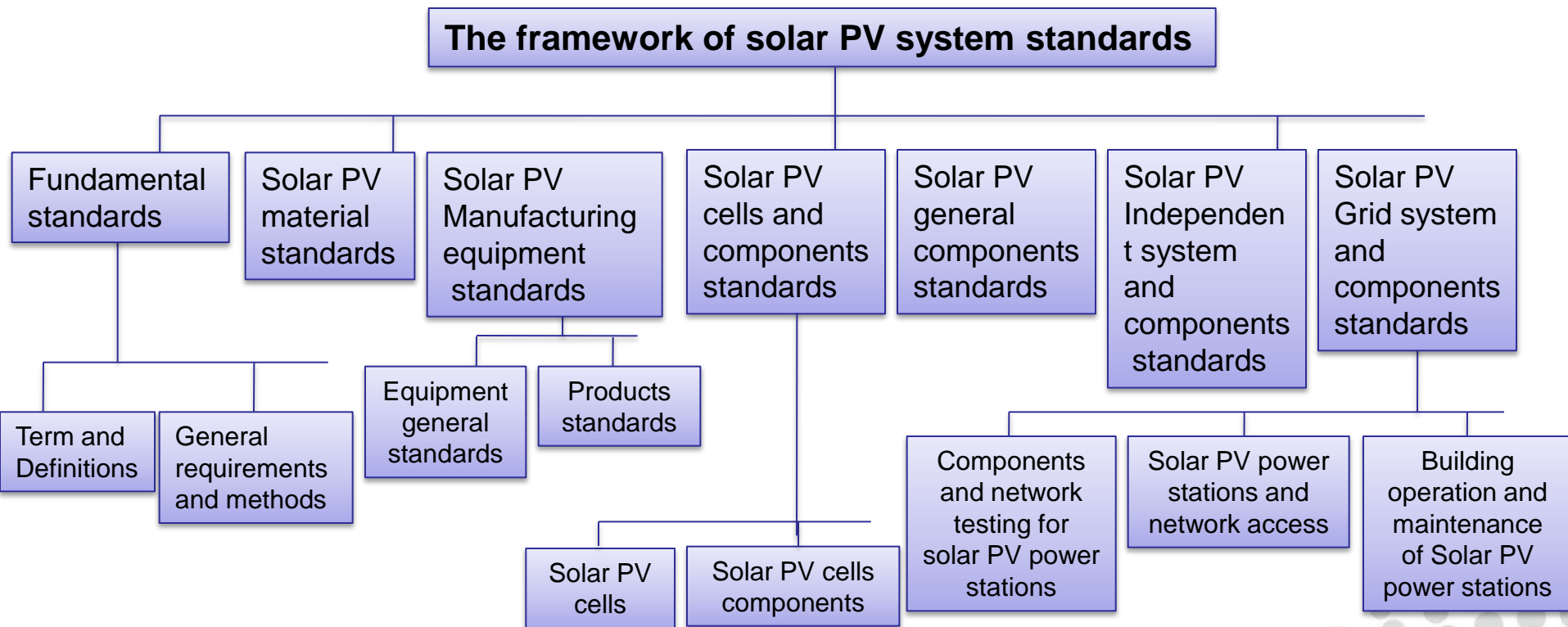
Solar Energy Standardization

The framework of solar thermal power generation system standards



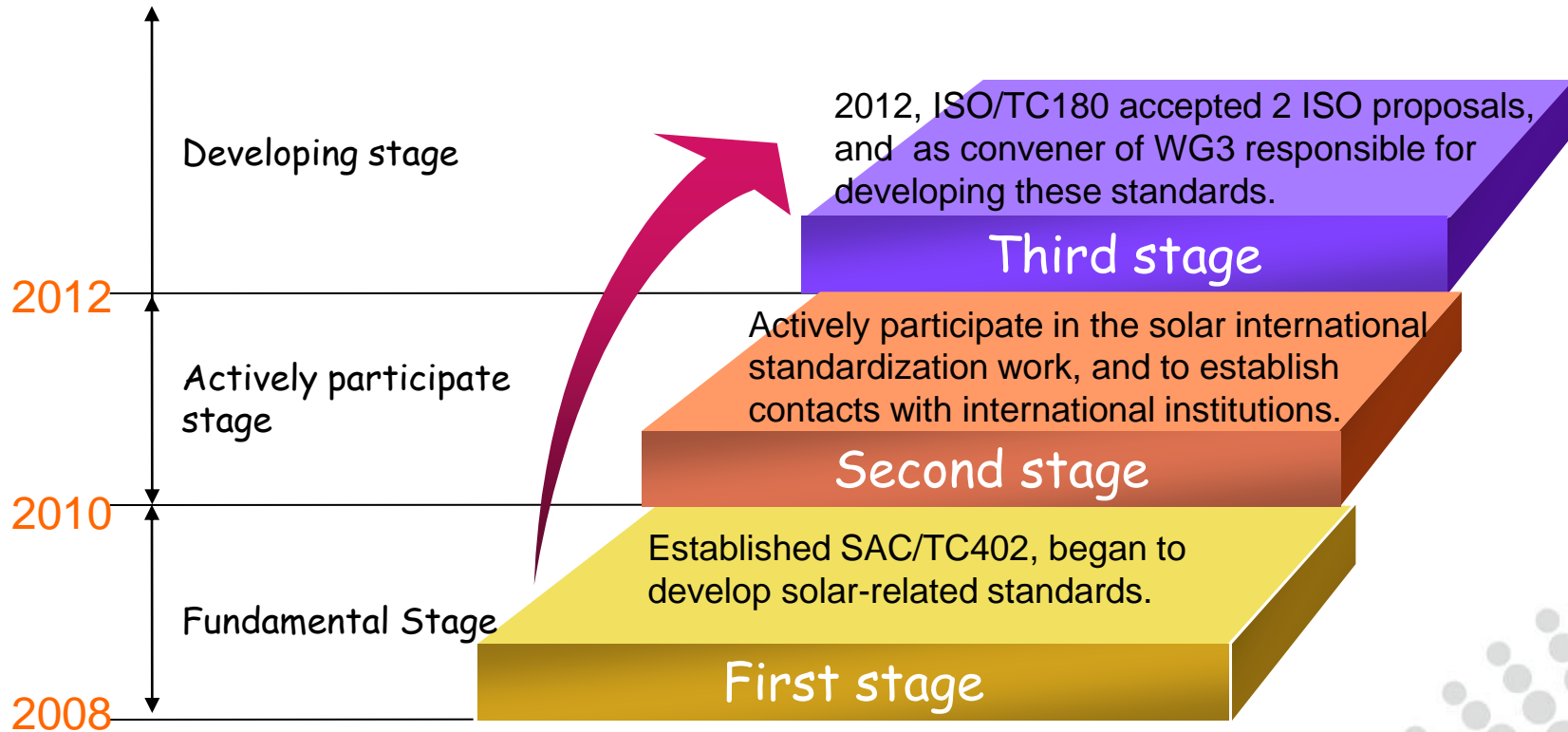
Only **1** national recommended standards “*Vocabulary of concentrating solar thermal power*” (GB/T 26972-2011) are promulgated.

Solar Energy Standardization

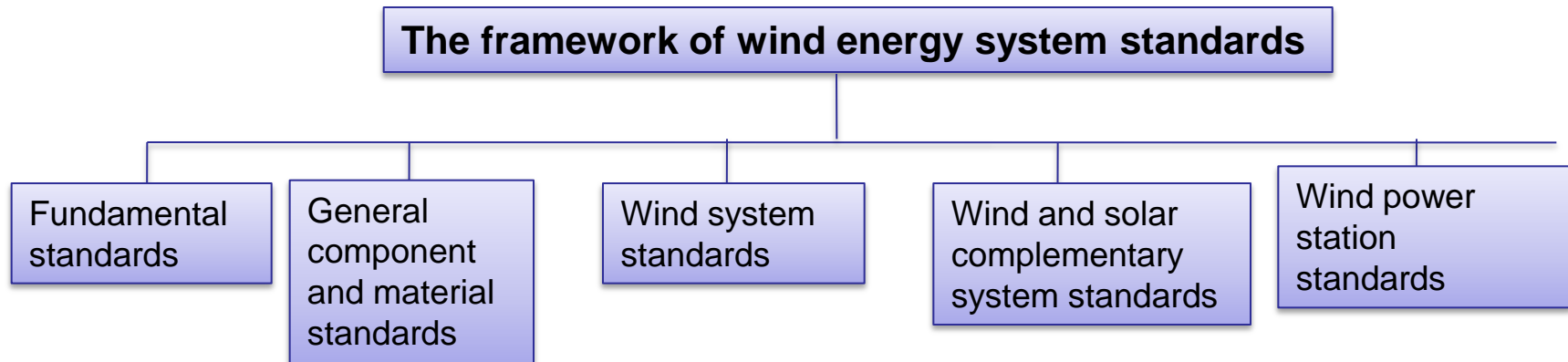


35 national standards are promulgated, most of them are recommended national standards. And 13 related standards are under development.

International Standardization Activities in Solar Energy

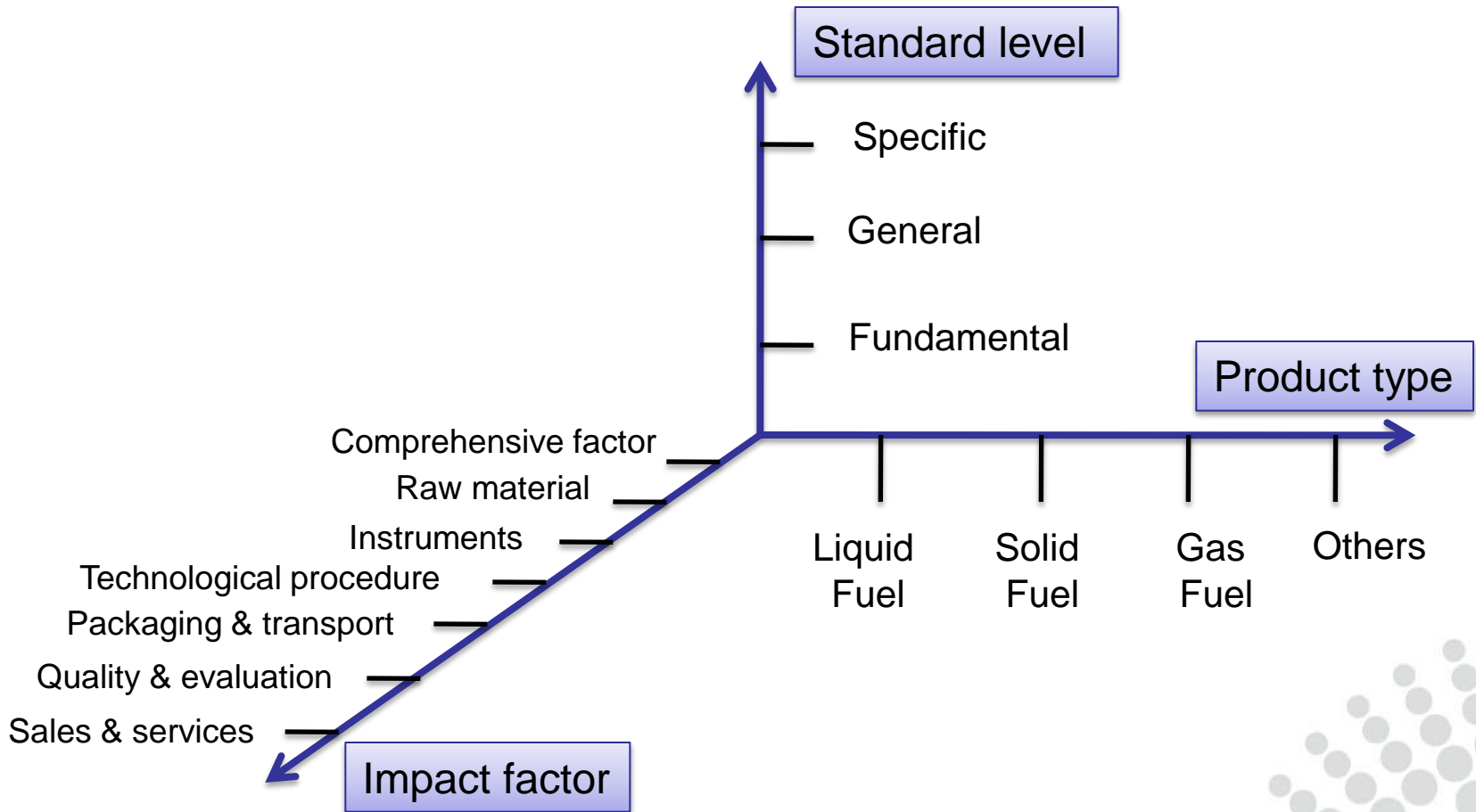


Wind Energy Standardization



49 national standards are promulgated, most of them are recommended national standards. And **11** related standards are under development.

Biomass Energy Standardization



3D frame of biomass energy standard system

Hydrogen energy Standardization

The framework of hydrogen energy standards

6 national standards are promulgated, all of them are recommended national standards. And 18 related standards are under development.

Fundamental standards

Hydrogen generation and purification standards

Hydrogen engineering standards

Hydrogen quality standards

Hydrogen safety standards

Hydrogen transportation standards

Hydrogen utilization standards

Hydrogen related testing standards

International Standardization Activities in Renewable Energy

- **Actively participate in the formulation of international standards in renewable energy field.**
- **3 International standards proposals were accepted, 2 were in Solar Energy field, and 1 was in hydrogen energy field.**
- **Undertake Co-Chair in ISO/SAG-E “Energy efficiency and renewable energy sources strategic advisory group”.**
- **Undertake the secretariat of ISO/TC 255 “Biogas Technical Committee” from 2010.**

Future Prospects

1

Full electrification is planned by 2015. By 2020, total renewable energy capacity is planned to be secondly doubled.

2

By 2020, the developed renewable energy applied system has independent intellectual property right.

3

Improve and emphasis on the renewable energy standard system, positive participate in the development of international standards.

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Thank you!

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