BASF investgates establishment of second Verbund site in China

Dr. Martin Brudermüller, Chairman of the Board of Executive Directors and Chief Technology Officer
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Dr. Martin Brudermüller
Chairman of the Board of Executive Directors and Chief Technology Officer, BASF SE

The spoken word applies.
Cautionary note regarding forward-looking statements

This presentation contains forward-looking statements. These statements are based on current estimates and projections of the Board of Executive Directors and currently available information. Forward-looking statements are not guarantees of the future developments and results outlined therein. These are dependent on a number of factors; they involve various risks and uncertainties; and they are based on assumptions that may not prove to be accurate. Such risk factors include those discussed in the Opportunities and Risks Report from page 111 to 118 of the BASF Report 2017. BASF does not assume any obligation to update the forward-looking statements contained in this presentation above and beyond the legal requirements.

Asia and China continue to dominate global chemical production

Real chemical production (excl. pharma) (trillion US$, base year 2015)

<table>
<thead>
<tr>
<th>Region</th>
<th>2015</th>
<th>CAGR</th>
<th>2025</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>3.6</td>
<td>3.4%</td>
<td>5.0</td>
</tr>
<tr>
<td>Asia Pacific</td>
<td>62%</td>
<td>4.4%</td>
<td>5.0</td>
</tr>
<tr>
<td>Europe</td>
<td>15%</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>North America</td>
<td>16%</td>
<td>6%</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>7%</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>Greater China</td>
<td>3%</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>South Asia</td>
<td>5%</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>South East Asia</td>
<td>5%</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>South Korea</td>
<td>6%</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Japan</td>
<td>7%</td>
<td>7%</td>
<td></td>
</tr>
<tr>
<td>ANZ</td>
<td>1%</td>
<td>6%</td>
<td></td>
</tr>
</tbody>
</table>

Source: BASF
Good morning ladies and gentlemen,

To begin with, I would like to emphasize the relevance of Asia and particularly China for the chemical industry:

- As you can see on slide 3, China’s share of the global chemical production is expected to continue to increase from around 40% to around 48% between 2015 and 2025.
- Already today, and even more so in the future, China is the key market in Asia as well as globally – both for BASF and for the chemical industry overall.

In recent years, growth is driven by increased domestic consumption, higher standards of living as well as more local value creation and the shift from “made in China to created in China”.
BASF is a well-established and highly-recognized company in China

- Mainland China, Hong Kong, Taiwan
  - 25 major wholly-owned subsidiaries
  - 7 joint ventures
  - 25 production sites
  - 24 sales offices
  - 8,982 employees
  - €7.3 billion sales in 2017 (~€8.7 billion including 50% of BASF-YPC, Nanjing)
BASF is very well prepared to capture future growth in China. We have built an extensive network throughout the country. Slide 4 gives you an overview of our business and sites in China. The most important ones are:

- Shanghai, home of our Greater China headquarters and the Innovation Campus, as well as the Caojing production site,
- Nanjing, where our joint venture Verbund site with Sinopec and a wholly owned site are located, as well as
- Chongqing with the MDI production complex, which is also wholly-owned by BASF.

These cornerstone sites are the backbone for our activities. In total, BASF has almost 9,000 employees in Greater China and 25 production sites close to our customers. Sales with customers in Greater China amounted to €7.3 billion in 2017. If you include our 50% share of BASF-YPC’s sales, the figure increases to €8.7 billion.
BASF is growing in and with China

1850s  1885  1960s  2000s  2010s  2020s

1850s  First production in China
1885  First delegate in China
1966  Inauguration of Nanjing Verbund site
2005  Expansion of acrylic acid production at Nanjing Verbund site
2010  Expansion of Nanjing Verbund site
2014  Inauguration of Chongqing MDI complex
2015  Inauguration of Maoming site
2010  Inauguration of Innovation Campus Shanghai
2012  Expansion of Innovation Campus Shanghai: Automotive Application Center
End of 2018  Intended establishment of Verbund site in Guangdong
BASF’s strong position in China was not built overnight, and not even in the last couple of decades. Slide 5 documents that BASF has a very long-standing and successful history in China:

- We have been doing business in the country for more than 130 years.
- Since the 1960s, BASF started investing in production facilities in China.
- The Innovation Campus Shanghai, which we established in 2012, has developed close cooperation in joint innovation projects with Chinese customers in high-end applications, such as light-weight materials for automotive, cosmetics and detergents.

We continue to invest in the country – in production and innovation to support our customers in many different industries.
BASF’s existing Verbund site in Nanjing** has been consistently profitable with reliable dividend payments

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales (in billion €)</th>
<th>EBITDA (indexed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>1.72</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>1.36</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>1.93</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>2.76</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>2.83</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>2.84</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>2.71</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>2.21</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>2.36</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>2.76</td>
<td></td>
</tr>
</tbody>
</table>

**Year of scheduled turnaround; ** BASF-YPC Company Ltd. Nanjing, 50:50 JV with Sinopec.
[Slide 6: BASF’s existing Verbund site in Nanjing has been consistently profitable with reliable dividend payments]

BASF’s Verbund site in Nanjing is an excellent example, how high efficiencies can add value. Like at our other Verbund sites worldwide, all plants of this joint venture with Sinopec are interconnected. They use products, by-products and energy in the most efficient way, to save costs and minimize environmental impact.

On slide 6, we provide you with some financial details:

- Even in economically challenging years, the EBITDA of BASF-YPC remained on a high level.

- A planned site turnaround in 2015 reduced sales. Nevertheless, profitability improved in 2015 compared to the low level in 2014.

- In 2016 and 2017, profitability further increased.

Closely linked to BASF-YPC is our wholly-owned company, BASF Specialty Chemicals Nanjing. It is a showcase for the advantages of backward integration, as BASF Specialty Chemicals is connected via pipeline to BASF-YPC, its' most important raw materials supplier. And the Verbund goes beyond raw materials: BASF-YPC also provides utilities to the company, like water, steam and pressurized air. These are clear advantages of our Verbund concept, which we also want to apply at the new site in South China.

Our Verbund concept fully meets the guiding requirements of the Chinese government for the petrochemical industry, focusing on clustering and integration as well as the development of more high-end specialty value chains.
Guangdong province is ideally located to serve the fast-growing, undersupplied market in South China

**Market characteristics**

- More than 110 million residents in Guangdong province
- GDP Guangdong (2017): ~US$1,330 billion (to reach GDP of South Korea soon)
- Key customer industries: transportation, consumer goods, home and personal care, electronics
- Chemical products are generally undersupplied by local production
[Slide 7: Guangdong province is ideally located to serve the fast-growing, undersupplied market in South China]

With a second Verbund site in China, we want to ensure BASF’s continued participation in the growth opportunities offered by the world’s largest chemical market and strengthen our commitment to China. The high-tech Verbund site in Guangdong province would supply customers based in South China and enhance BASF’s presence in this fast-growing and still undersupplied market. The GDP growth of around 7% per year in Guangdong – one of the two economic powerhouses in China besides Jiangsu – is driven by industrial investments of innovative customer industries such as automotive, consumer goods, home and personal care. The province has more than 110 million residents and its GDP already today exceeds the GDP of Spain and will soon reach South Korea’s GDP.
Guangdong is home of key customers from fast-growing industries

Strongly growing industrial base
(Real value added, manufacturing in Guangdong; base year 2015)

Largest electronics production in China
(Real value added, electronic equipment in Guangdong; base year 2015)

Largest automotive production in China
(number of cars built in Guangdong [in 1,000])

Increasing growth of private consumption
(Real household consumption in Guangdong; base year 2015)
[Slide 8: Guangdong is home of key customers from fast-growing industries]

South China, especially Guangdong, is the home of key customers from fast-growing industries. The province is a manufacturing hub. Let me illustrate this with a few facts:

- Guangdong is the province with the largest automotive production in China. The transportation industry is overall strongly represented: Automotive, high-speed railway and aviation companies form a strong customer base.

- Many internationally active electronics producers also have their production facilities in Guangdong.

- Most of the diaper producers are located in South China.

- In recent years, household consumption in Guangdong also grew noticeably.

In a nutshell: There is a fast-growing local demand for innovative chemical products and solutions.
BASF intends to build a world-class Verbund site in South China to serve fast-growing customer industries in the region

**Intended scope of new Verbund site (preliminary)**

- **Steam cracker** (planned capacity ~1 million tons p.a. of ethylene)
- Ethylene
- Ethylene oxide
- Acrylic acid
- Oxo-C4
- HPPO
- Raffinate
- Butadiene
- Propylene
- Crude-C4

**Parameters**

- 100% BASF-owned and operated
- Potential investment of up to US$10 billion until around 2030
- Investment to evolve in phases
- Startup of first plants in 2026 at the latest
- Most advanced Verbund site with smart manufacturing concept
- Environment, health and safety concept according to BASF’s global standards and local laws and regulations
- Next step: Pre-feasibility study
[Slide 9: BASF intends to build a world-scale Verbund site in South China to serve fast-growing customer industries in the region]

The Verbund site we intend to build in Guangdong province would operate a world-scale steam cracker with a capacity of around 1 million tons per year of ethylene, which would be used to produce ethylene oxide and ethylene glycol. These are important raw materials for the production of amines and surfactants. Propylene would provide the feedstock, for example, for acrylates and oxo-alcohols. The scope would also include intermediates as well as more consumer-oriented products like superabsorbent polymers.

Let me share some further relevant details:

- The site would be built in accordance with BASF’s high global EHS standards and local laws and regulations.
- BASF intends to implement a comprehensive smart manufacturing concept, based on cutting-edge technologies.
- The new Verbund site would evolve in phases, requiring estimated capital expenditures of up to US$10 billion by completion of the project around 2030.
- First plants could be completed by 2026 at the latest.

Yesterday, the Executive Vice Governor of Guangdong province and I signed a respective non-binding Memorandum of Understanding (MoU) in the presence of the German chancellor and the Chinese premier in Berlin.
Our new Verbund site is an important step to participate in the opening up of the chemical industry in China. Until recently, ownership of a steam cracker was limited to maximum 50% for a foreign company. BASF would be once again a pioneer in China as the first company using this opportunity. Once again, such an important step of market opening would occur in Guangdong. The province has a long history in China in that respect.

Please keep in mind that the signing of the MoU is only a first step, many further steps will have to follow to make this investment a reality. The immediate next step is the completion of a pre-feasibility study.
The new Verbund site – an important contribution to BASF’s profitable growth in China and also globally

- Asia and China continue to dominate global chemical production
  - Already today, China has a world market share of around 40%

- BASF is a well-established and highly-recognized company in China
  - Strong production footprint with 25 production sites
  - Sales offices across China
  - Innovation Campus in Shanghai

- Guangdong province is ideally located to serve the fast-growing, undersupplied market in South China
  - Customers from key industries like transportation or consumer goods as well as further fast-growing industries are located in Guangdong

- BASF intends to build a world-class Verbund site in South China to serve fast-growing customer industries in the region
To conclude, I will summarize my presentation in four key messages:

- Asia and China continue to dominate global chemical production.

- BASF is a well-established and highly-recognized company in China.

- Guangdong province is ideally located to serve the fast-growing, undersupplied market in South China.

- BASF intends to build a world-class Verbund site in South China to serve fast-growing customer industries in the region.

This investment will be an important contribution to BASF’s profitable growth in China and also globally.

Now Stephan and I are happy to answer your questions.