
GSTC Syngas Database: 2017 Update

Gasification & Syngas Technologies
Conference

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GTC, 2017

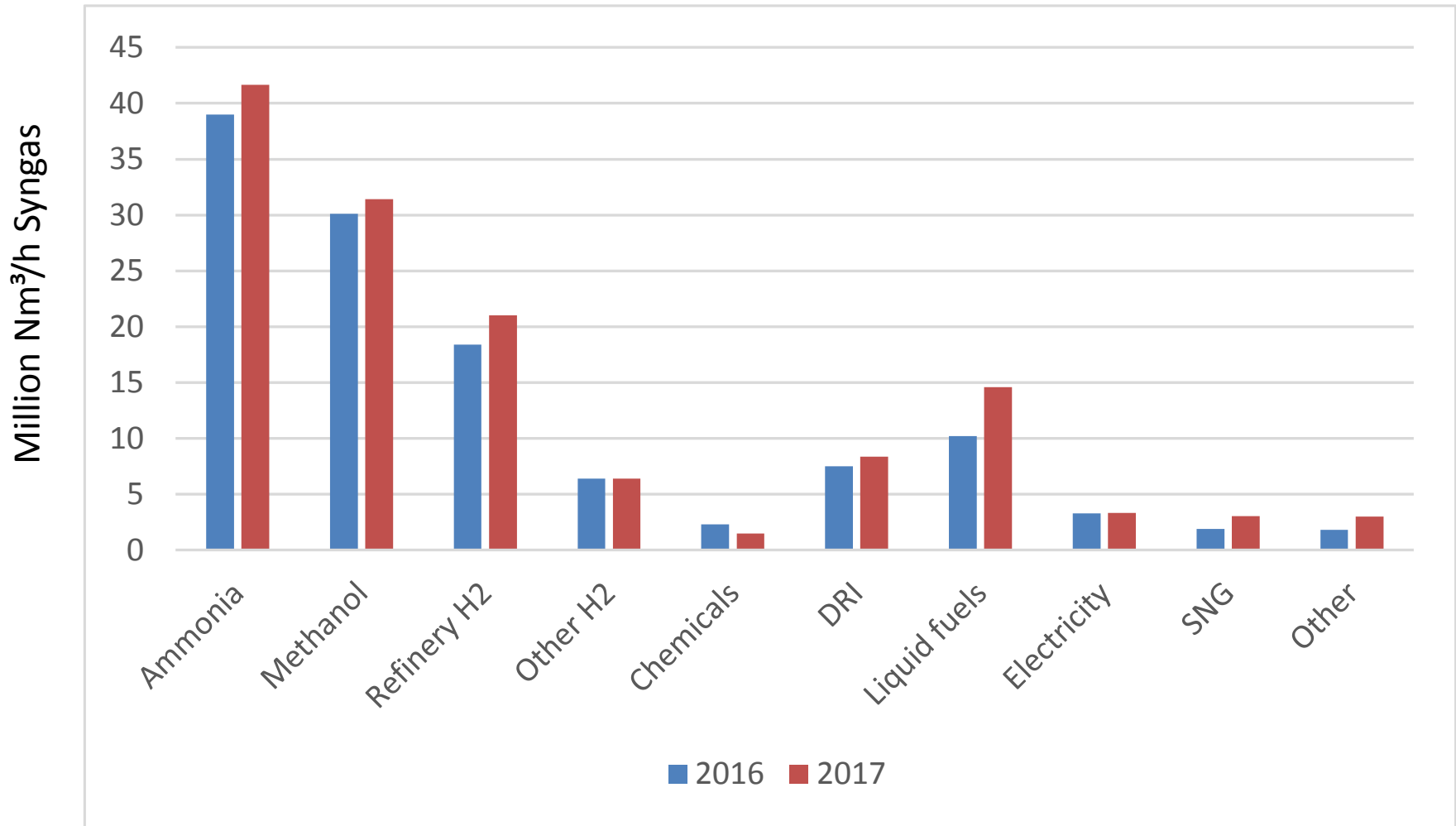
Overview

- **Introduction**
- **Syngas market development**
- **Gasification statistics**
- **Reforming statistics**
- **Conclusions**

Introduction

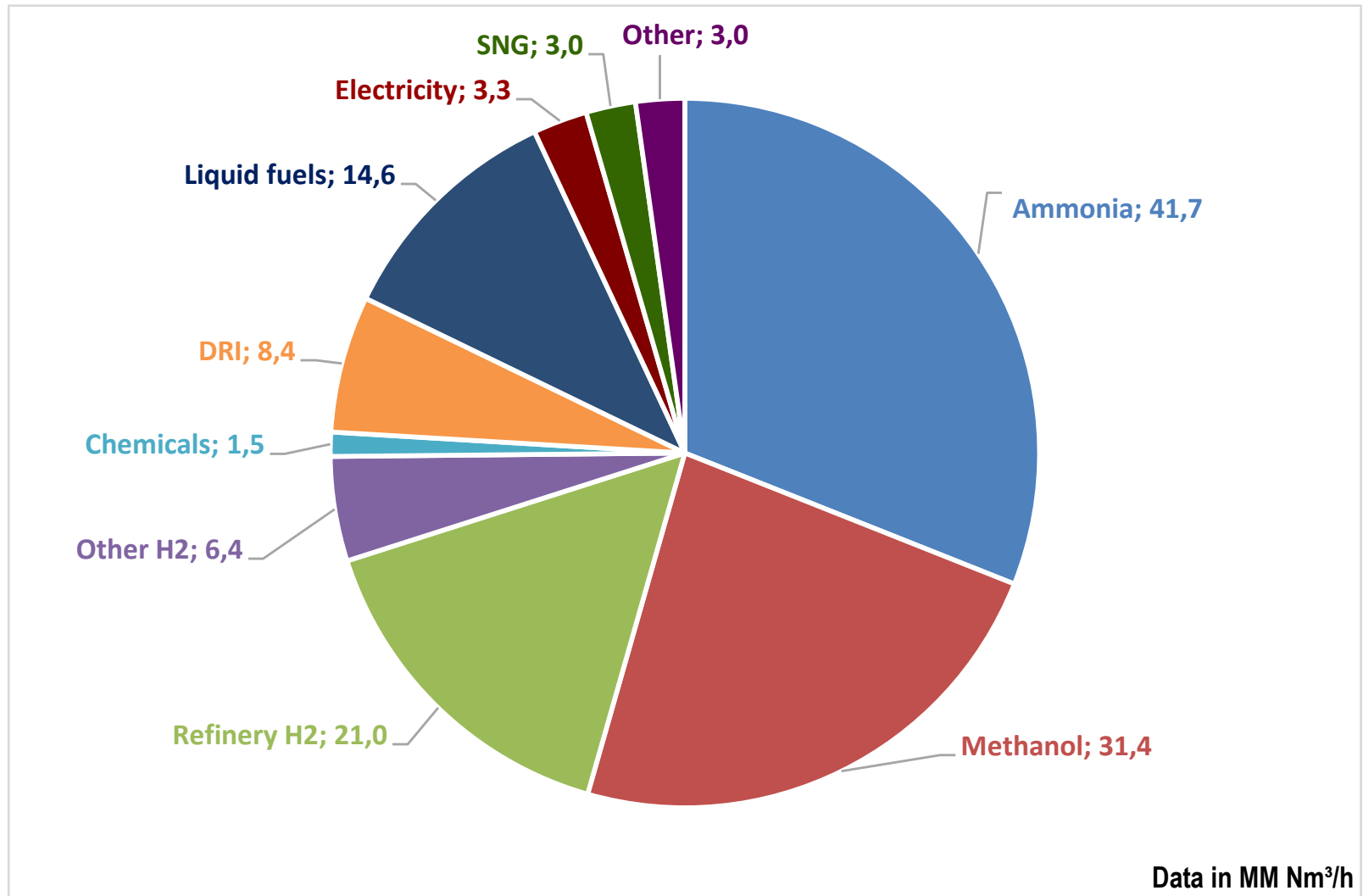
- **First edition 1999 as gasification database**
- **Updated regularly since then**
- **2016 gasifier update**
 - Total 1014 projects, 2559 gasifiers, of which:
 - Active commercial operating and planned 356 projects, 863 gasifiers
 - 154 GW_{th} operating, 96 GW_{th} under construction and 250 GW_{th} planned.
- **SMR database integrated for 2017**
 - ~95% of ammonia, methanol, GTL and DRI plants
 - ~85% refinery hydrogen plants
 - Smaller plants less well covered

Syngas Market Development 2016-2017



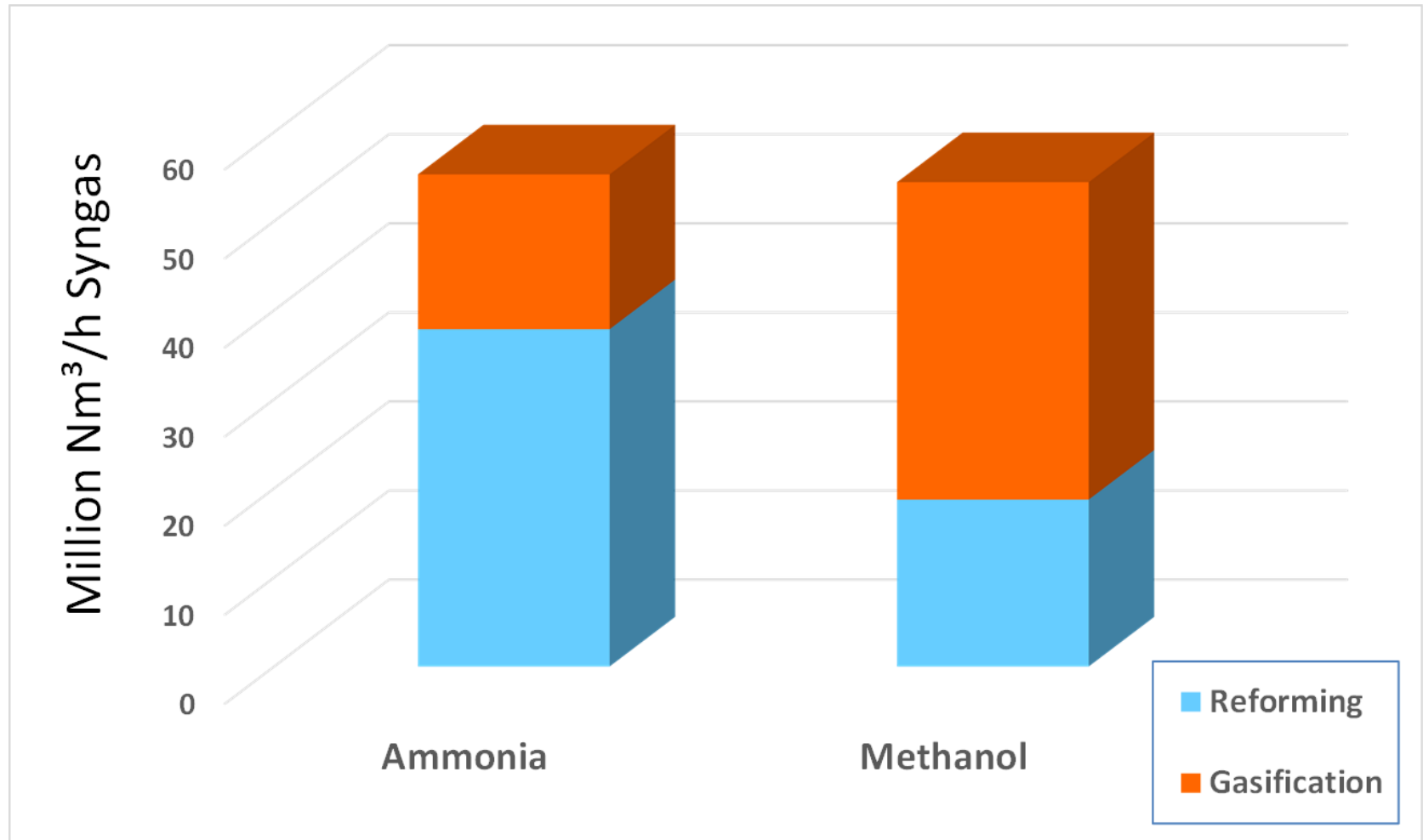
Source: GSTC Database, 2017

Total Syngas Market



Source: GSTC Database, 2017

Market Share by Technology Type



Source: GSTC Database, 2017

What's New in 2017 Database - Content

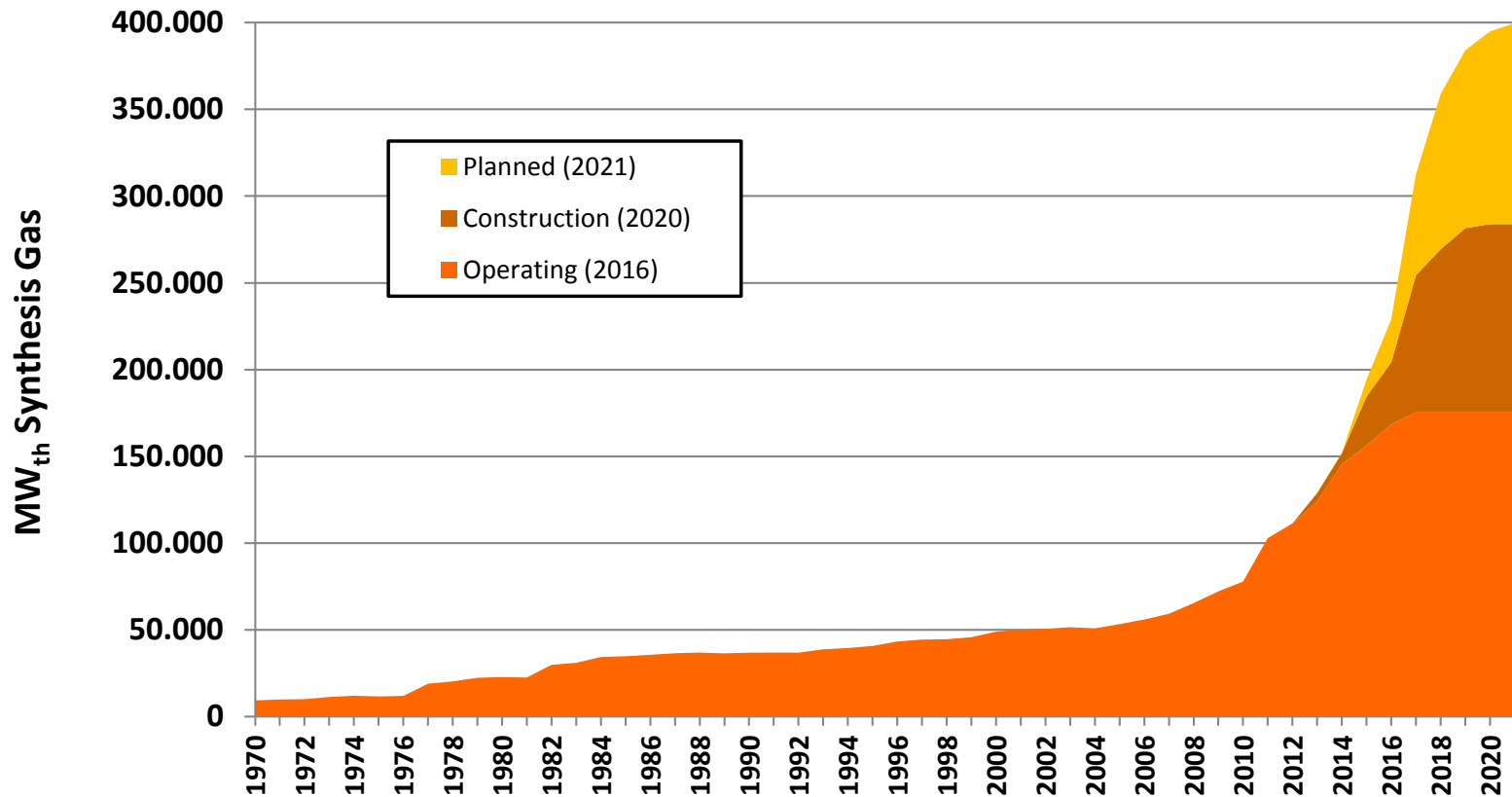
- **Gasification**

- Total 1099 projects, 2886 gasifiers not counting spares, of which:

Commercial	Projects	Gasifiers	GWth Syngas
Operating	379	938	173
Construction	131	348	108
Planned	146	734	116
Total	656	2,020	398

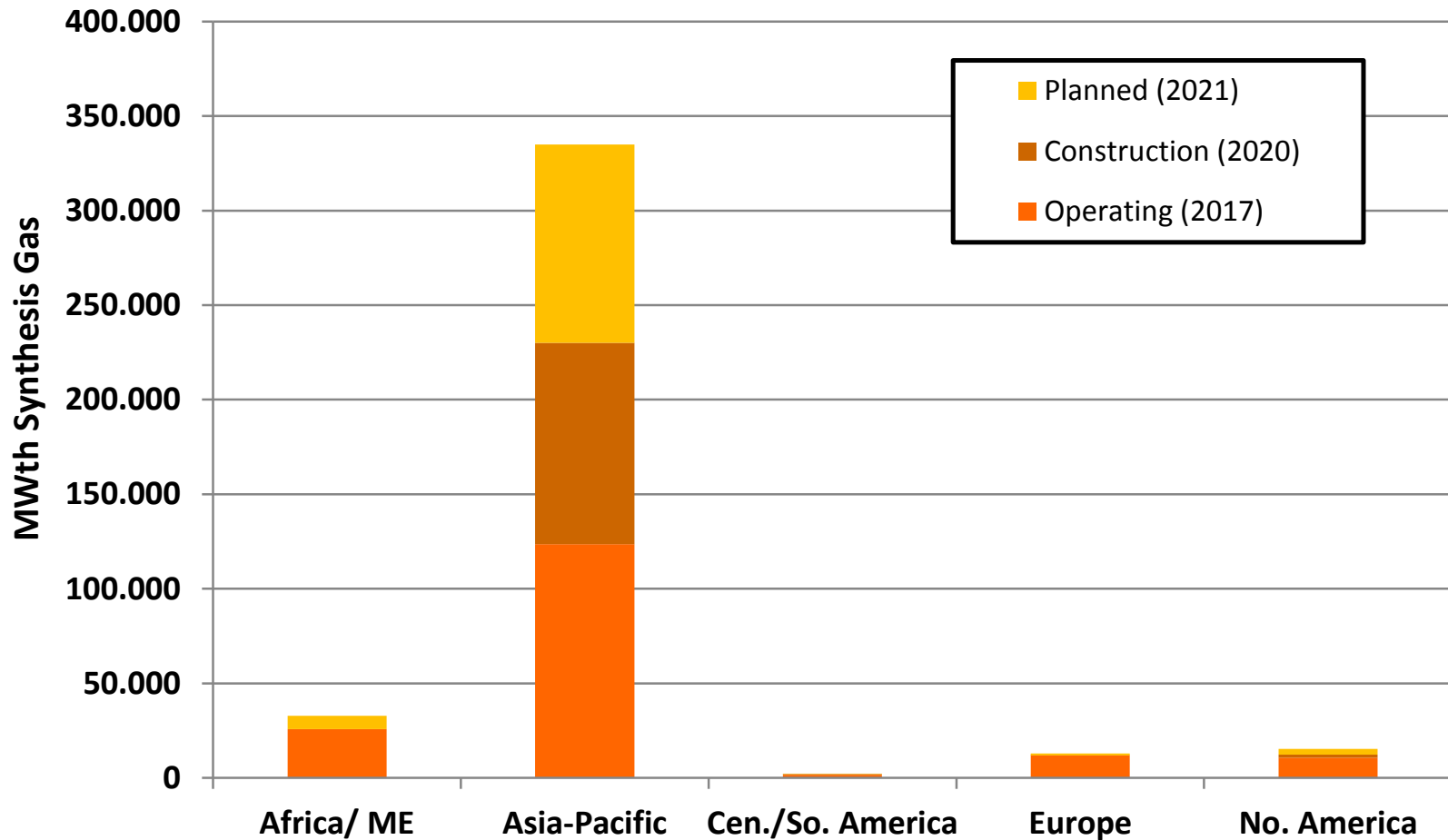
Note: Total database includes shutdown gasifiers, gasifiers never built or only in pre-planning stage, as well as pilot and demonstration gasifiers.

Cumulative Gasification Capacity



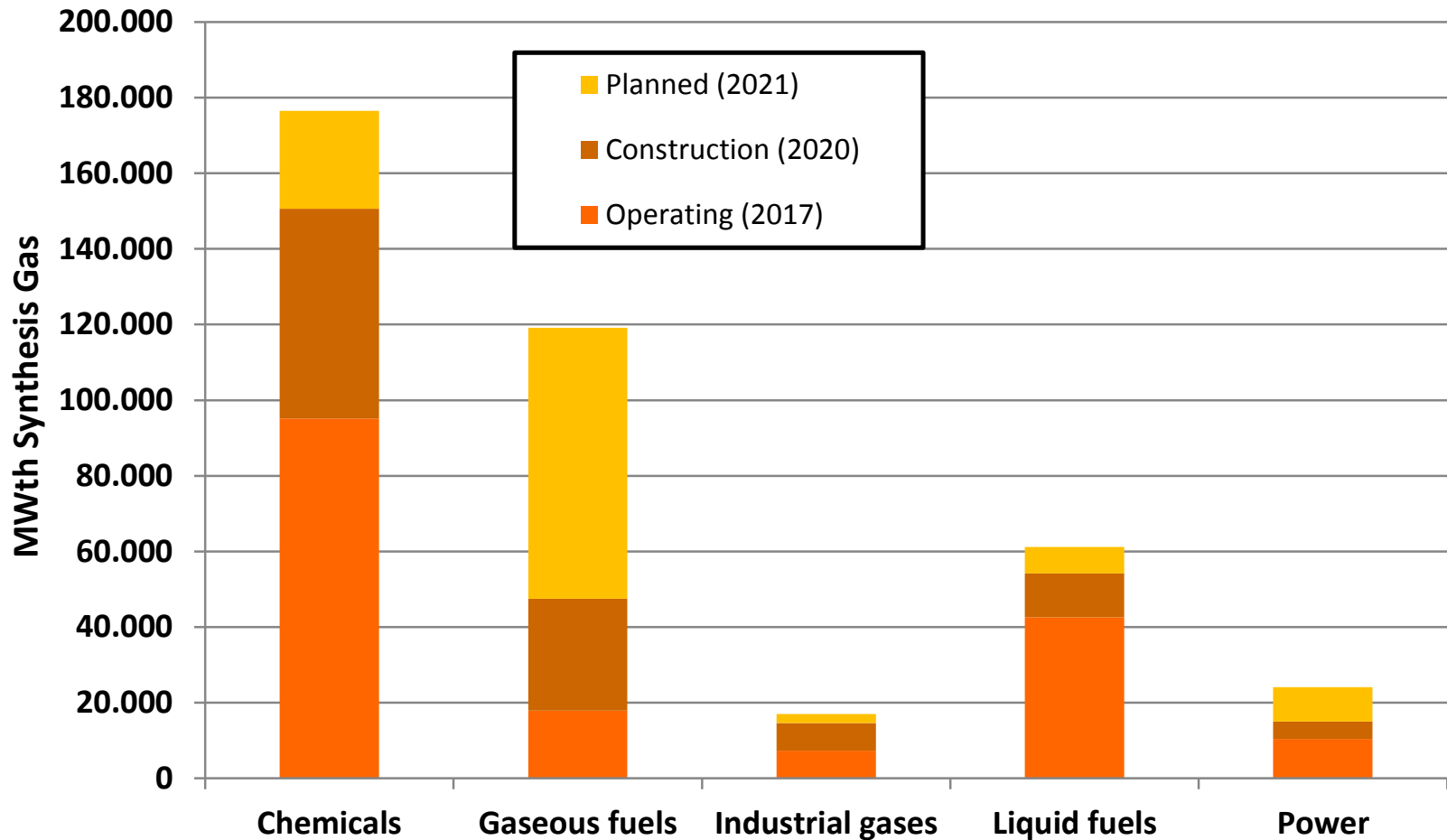
Source: GSTC Database, 2017

Gasification by Region



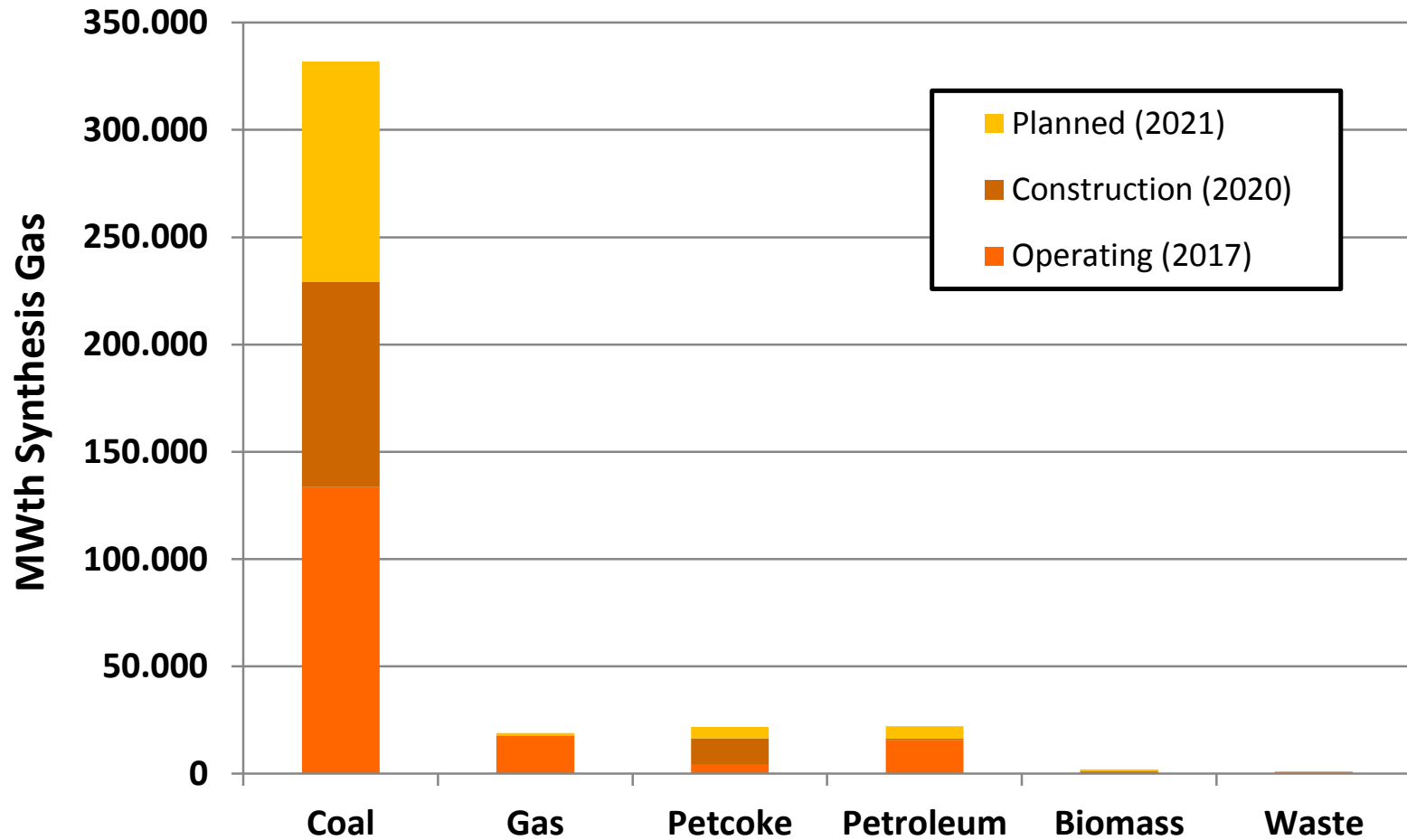
Source: GSTC Database, 2017

End Use Applications of Gasification Syngas



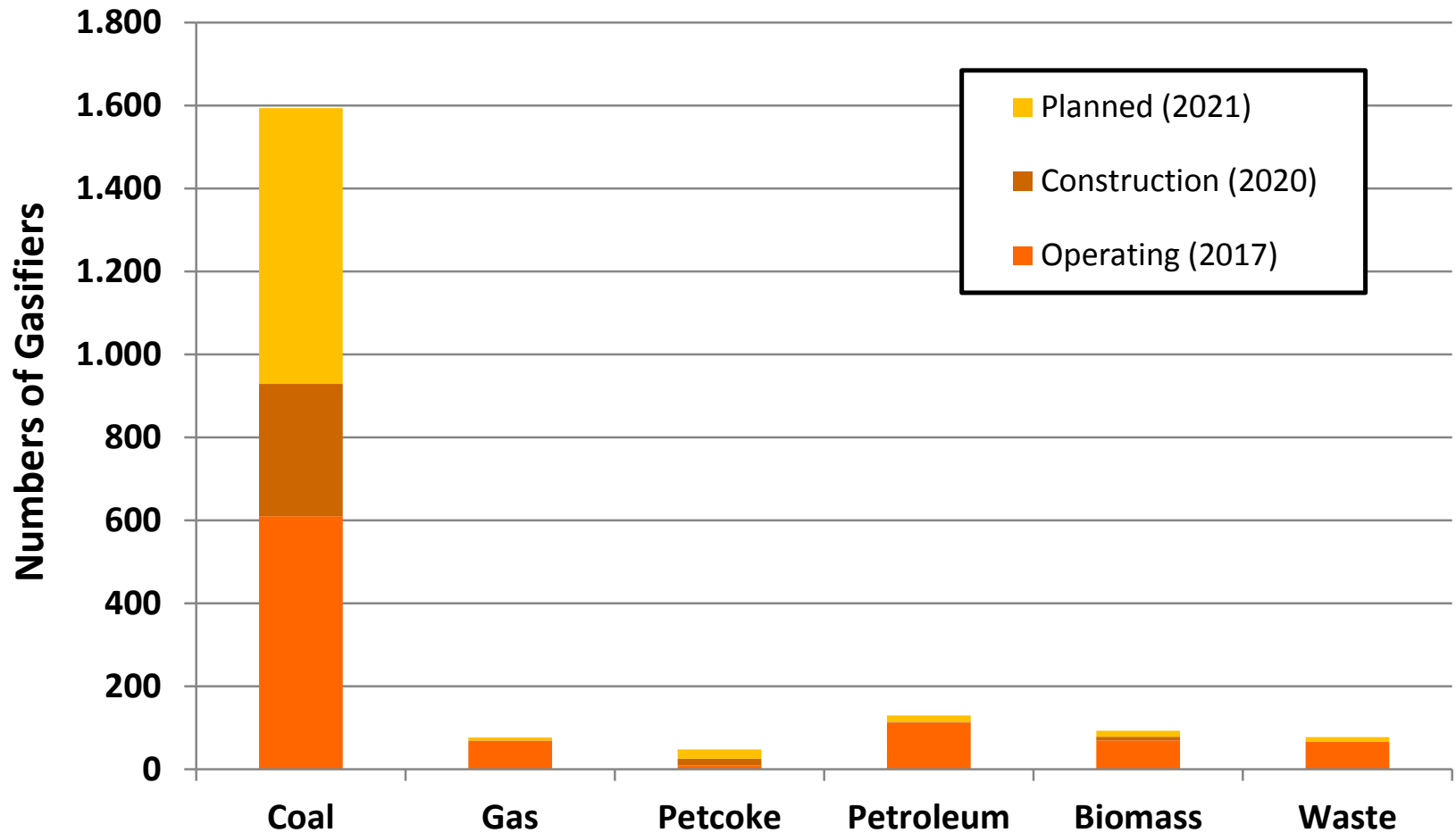
Source: GSTC Database, 2017

Primary Feedstocks for Gasification



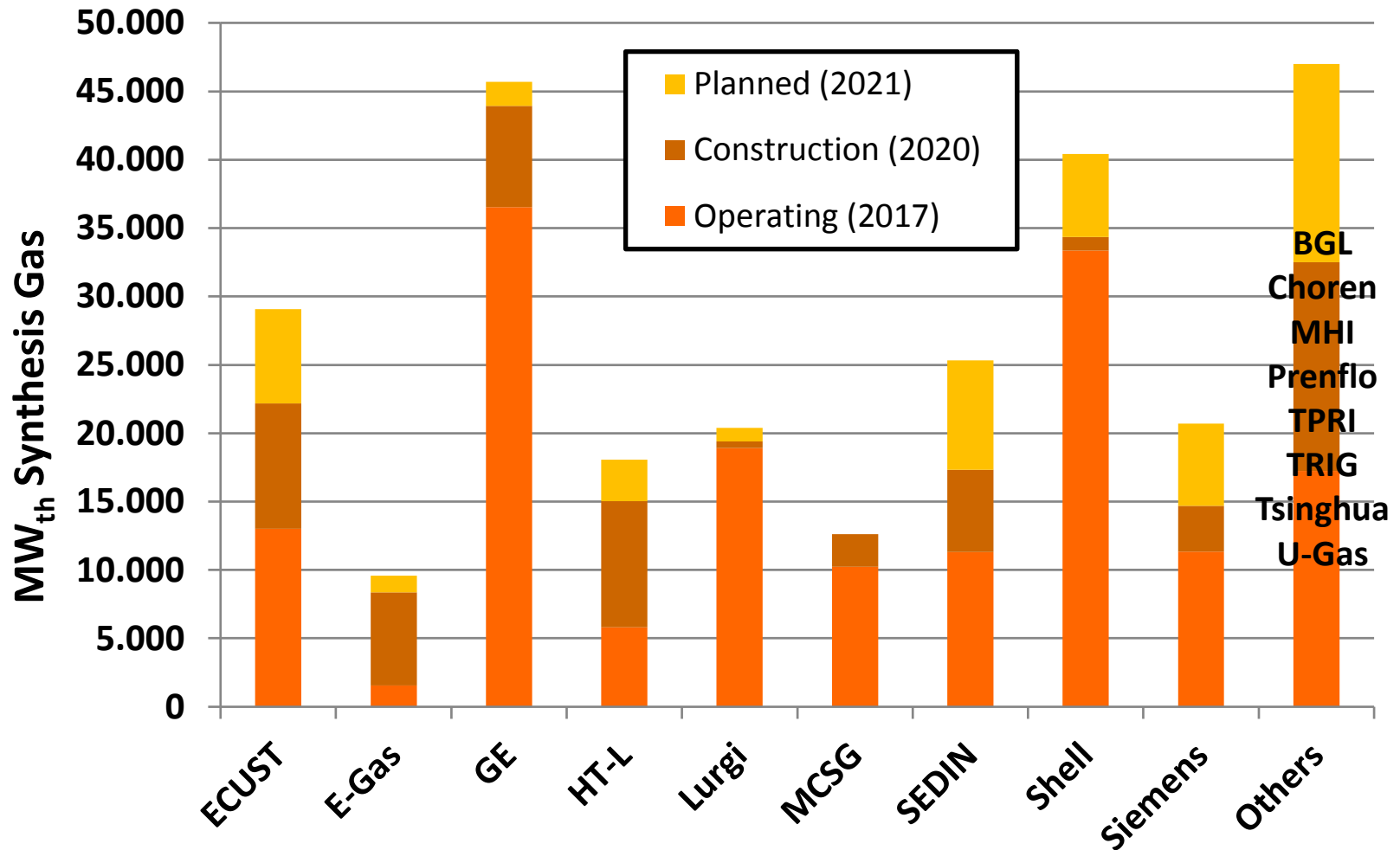
Source: GSTC Database, 2017

Number of Gasifiers by Primary Feedstocks



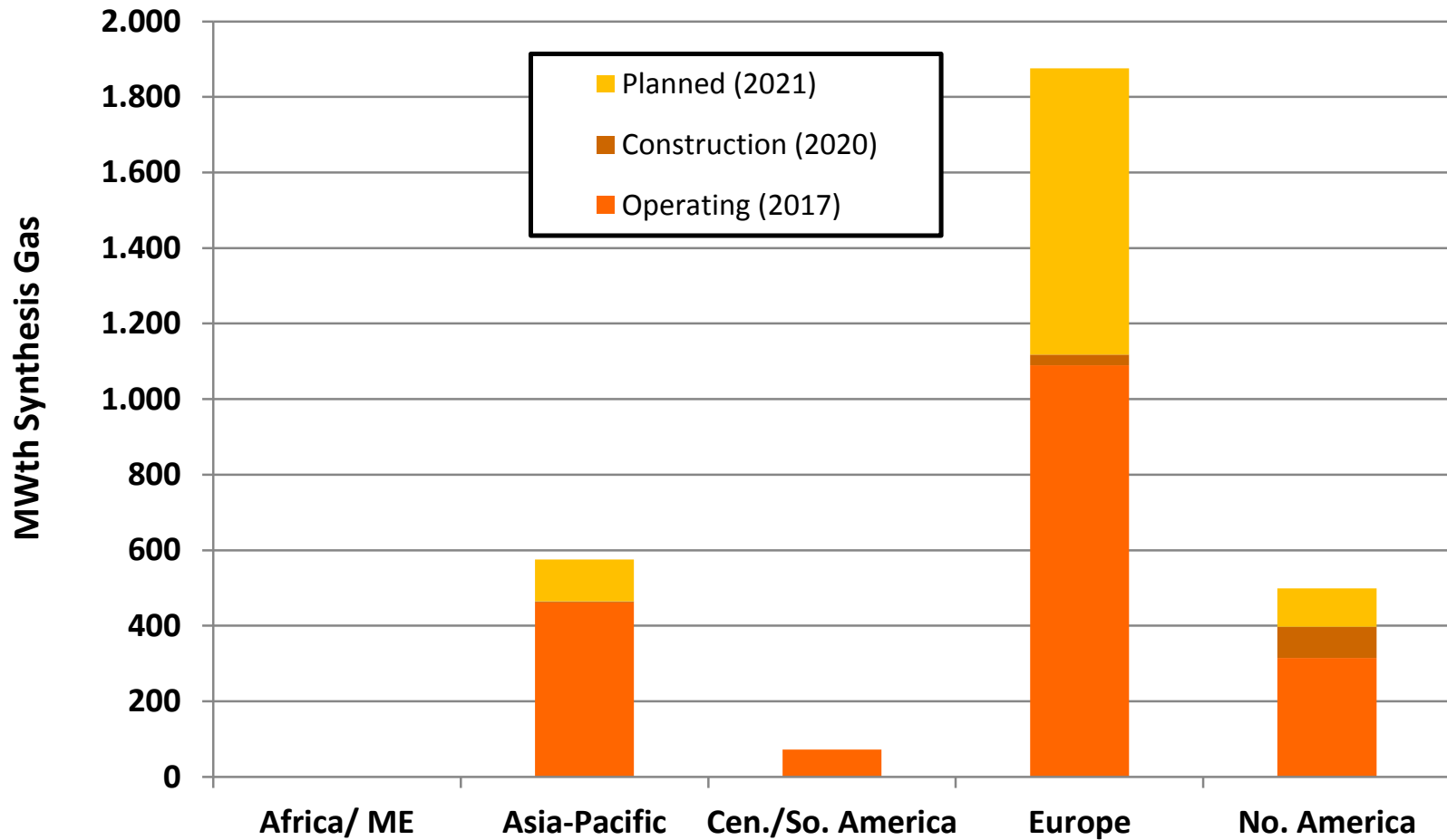
Source: GSTC Database, 2017

Gasification by Technology



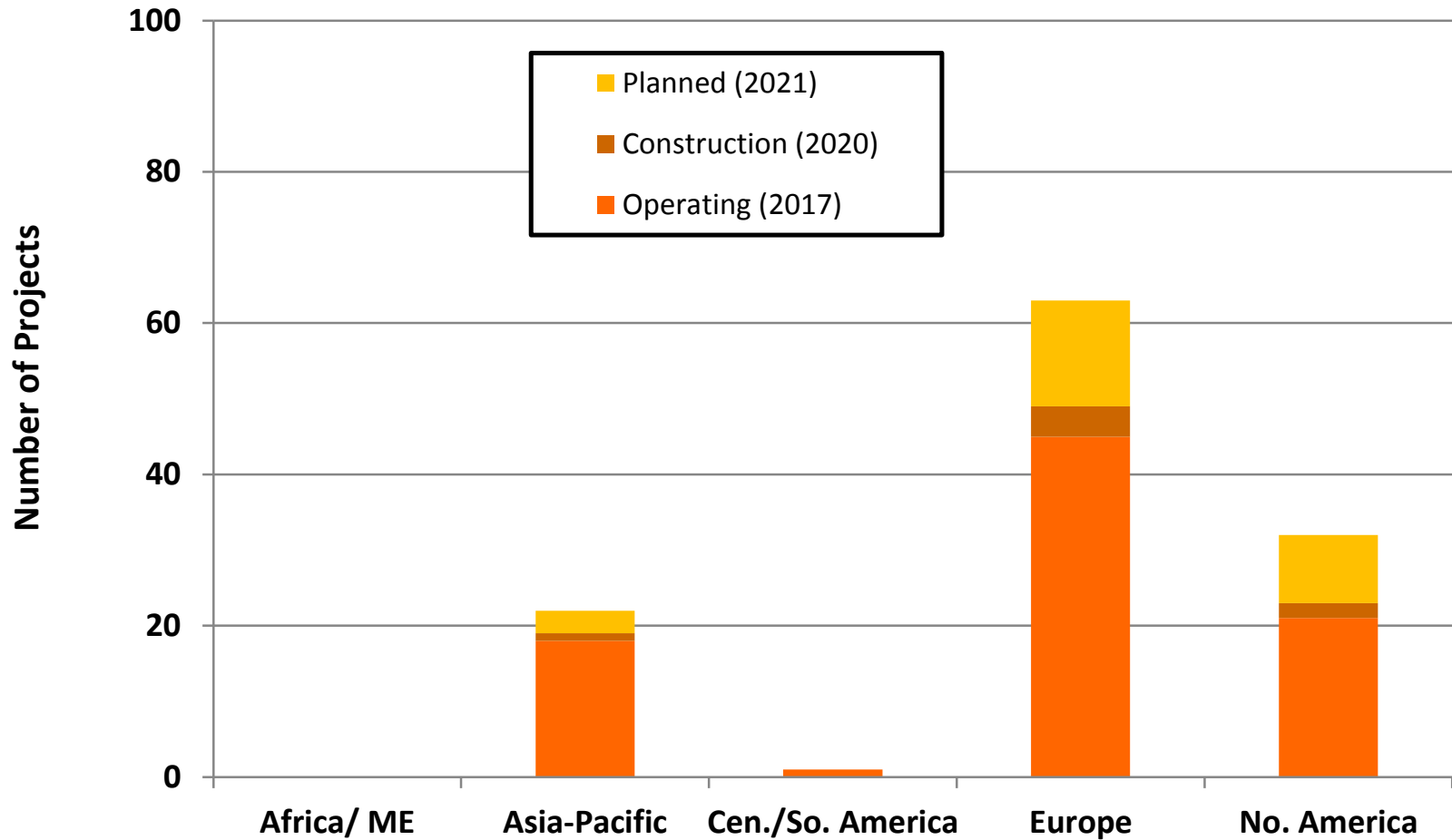
Source: GSTC Database, 2017

Biomass Gasification



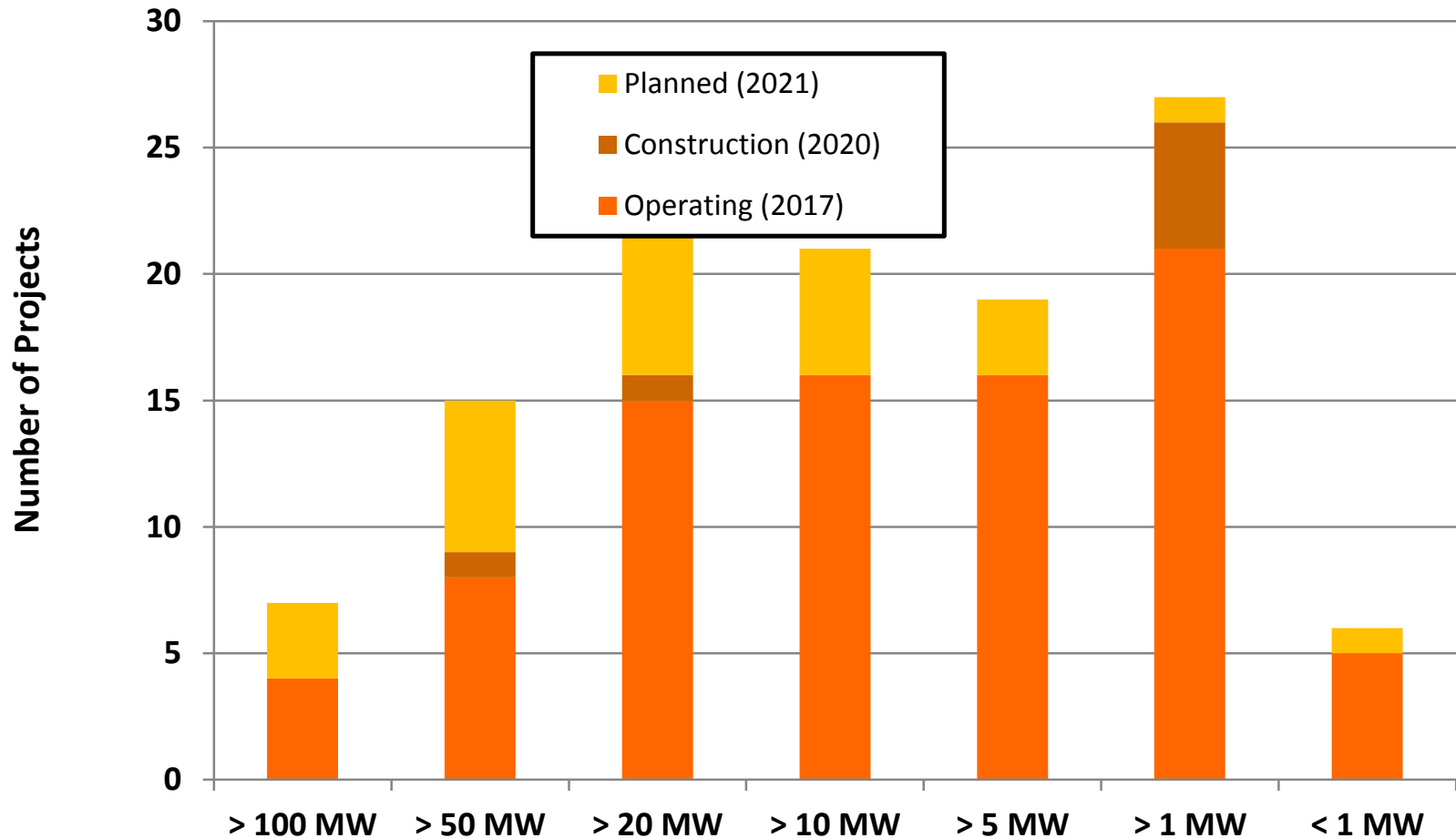
Source: GSTC Database, 2017

Numbers of Biomass Gasifiers



Source: GSTC Database, 2017

Biomass Gasifiers by Size



Source: GSTC Database, 2017

Reformer Syngas Database - Content

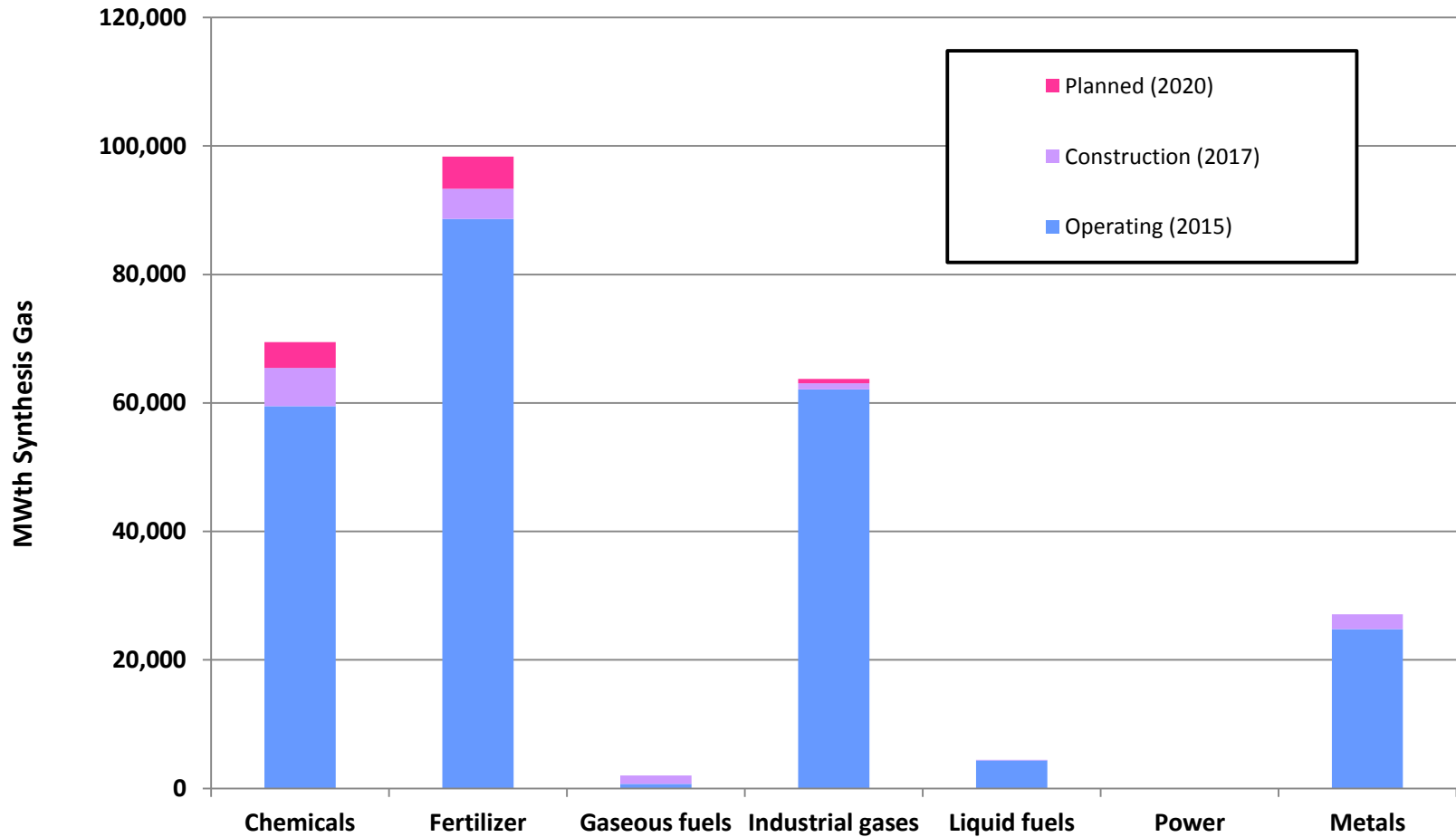
- **986 Projects**

Commercial	Projects	Units	GWth Syngas
Operating	799	907	240
Construction	30	33	15
Planned	31	35	10
Total Active-Real and Planned	860	975	265

Note: Total database includes shutdown reformers, reformers never built or only in pre-planning stage, as well as pilot and demonstration reformers.

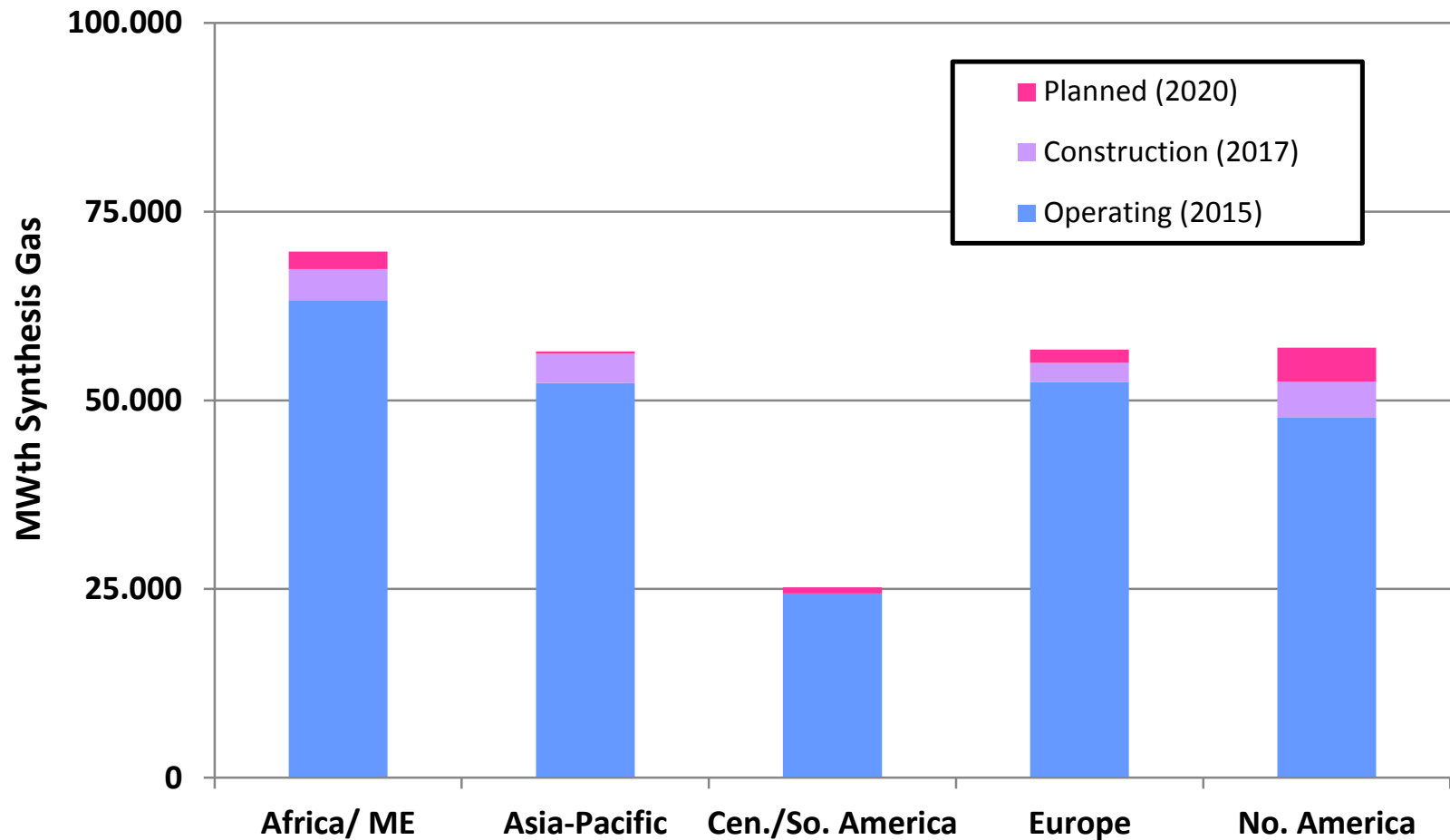
Source: GSTC Database, 2017

SMR/ATR Syngas by Application



Source: GSTC Database, 2017

SMR/ATR Syngas by Region



Source: GSTC Database, 2017

Conclusions

- **Integrating gasification and SMR databases allows full market overview by product**
- **Continuous, but moderate increase over last year over most product segments.**

Acknowledgements

- **Gasification & Syngas Technologies Council.**
- **Technology licensors, plant owners and others for contribution of project data.**
- **Any additions/corrections are always welcome**
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