Energy Data, BGR

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The Federal Institute for Geosciences and Natural Resources, or BGR, is a German Agency which publishes data on oil and gas resources and reserves. BGR data can be accessed here. This data is useful because resources and reserves are broken into their unconventional sub-components such as shale gas, tight oil, and coalbed methane. This is important in initializing total resources and reserves in the model, especially with the rise in unconventional gas and oil production in North America.

Series pulled from BGR

Variable	Definition	Units	Years	Last IFs Update	UsedInPreprocessor	UsedInPreprocessorFileName
EnCumProdGasBGR	Natural Gas Cumulative Production	BCM	2009-2018, 2020-2022	2024/04/17	0	
EnReserCBMBGR	Coalbed methane reserves	BCM	2010-2018, 2020-2022	2024/04/17	1	ENER
EnReserGasBGR	Natural gas reserves	BCM	2009-2018, 2020-2022	2024/04/17	1	ENER
EnReserShaleGasBGR	Shale Gas Reserves	BCM	2010-2018, 2020-2022	2024/04/17	1	ENER
EnResorCBMBGR	Coalbed methane Resources	BCM	2010-2018, 2020-2022	2024/04/17	1	ENER
EnResorGasBGR	Natural gas resources	BCM	2009-2018, 2020-2022	2024/04/17	1	ENER
EnResorShaleGasBGR	Shale Gas Resources	BCM	2010-2018, 2020-2022	2024/04/17	1	ENER
EnResorTightGasBGR	Tight Gas Resources	BCM	2011-2018, 2020-2022	2024/04/17	1	ENER
EnCumProdOilBGR	Cumulative Production Oil	Mt	2009-2018, 2020-2022	2024/04/17	0	
EnReserHeavyOilBGR	Heavy Oil Reserves	Mt	2010-2018, 2020-2022	2024/04/17	1	ENER
EnReserOilBGR	Crude oil reserves	Mt	2009-2018, 2020-2022	2024/04/17	1	ENER
EnReserOilSandsBGR	Oil Sands Reserves	Mt	2010-2018, 2020-2022	2024/04/17	1	ENER
EnReserShaleOilBGR	Shale Oil Reserves	Mt	2011-2018, 2020-2022	2024/04/17	1	ENER
EnResorHeavyOilBGR	Heavy Oil Resources	Mt	2010-2018, 2020-2022	2024/04/17	1	ENER
EnResorOilBGR	Crude oil resources	Mt	2009-2018, 2020-2022	2024/04/17	1	ENER
EnResorOilSandsBGR	Oil sands resources	Mt	2010-2018, 2020-2022	2024/04/17	1	ENER
EnResorShaleOilBGR	Shale Oil resources	Mt	2011-2018, 2020-2022	2024/04/17	1	ENER

Instructions on importing BGR data

Process of importing and blending:

In preparing these series, first downloaded the relevant energy data from the BGR website, or are available through a google search of "BGR Energy Resources [YEAR]".

- The study reported data in previous year.
- **Missing BGR Energy Study 2020, thus, we don't have data in 2019.**
- Starting from 2019, BGR also provided data in excel spreadsheet. Thus, the data after 2018 can be extracted from excel, not pdf.
- The data before 2018 need to be extracted from BGR reports in pdf.
- **The most recent data can be downloaded in BGR Energy Study in Germany version from here.**
    - The latest update was in April, 2024. The data in 2021 and 2022 were downloaded from the BGR Energy Study in Germany version.

Combined new data and current data in IFsHistSeries.db.

Some notes on the formatting process:

In 2014, term changed from Shale Oil to Tight Oil (applies to Series EnReserShaleOil and EnResourceShaleOil) not to be confused with Tight Gas.

Table numbers don't stay the same over different years in the energy reports.

Differences between resources and reserves: "…[That] part of a mineral resource, which has been fully evaluated and is deemed commercially viable to work, is called a mineral reserve [in effect, resources will always be larger than resources]" In effect, resources shouldn't change over time, while reserves can.

-Source: http://www.bgs.ac.uk/mineralsUK/mineralsYou/resourcesReserves.html; Accessed 3/6/16

Sudan and South Sudan: Most of the time, BGR lists reserve and resource values for "Sudan" and "South Sudan" individually. On occasion though, BGR will use "Sudan and South Sudan" as a composite, representing aggregated data for both of the countries but not providing it on an individual basis. This is rare, and only takes place in series EnReserGasBGR and EnResorGasBGR. In these cases, I calculated the values for "Sudan" and "South Sudan" by taking the value of "Sudan and South Sudan" and dividing it by the ratio of land mass between Sudan (728,215 sqm) and South Sudan (239,285 sqm). Also, per Steve Hedden, we don't enter values for Sudan in the series EnCumProdGas and EnCumProdOil.

Another issue that needs mentioning is BGR's usage of dashes ("-" or "—") in its Energy Reports. Dashes are intrepreted as 0's based on the definition given by BGR in the Energy Reports.

BGR occasionally uses "n.s." (or "n. s.") in its data, which is intrepreted as a null value. In the German translation, "k. A." is used instead of "n.s.".

If there is a less than sign in the data, it is dropped and the value preceding it is entered as is. Eg. <0.05 is entered as 0.05.

Reference Data: *Listed below is each BGR series updated, all with the name of the table in the Energy Report pdf, and the column of the table used before 2018 or with the sheet name in the Excel, and the column of the table used after 2018*

| | Data Before 2018 from pdf | | Data after 2018 from Excel | | | | | | | |
| | | | 2018 | | 2020 | | 2021 | | 2022 | |
Variable	Table Name	Column	Sheet Name	Column	Sheet Name	Column	Sheet Name	Column	Sheet Name	Column
EnCumProdGasBGR	Natural Gas in XXXX (year)	Cum. Production	s. A-15, Natural Gas, 2018 ...	Cum. Production	s. A-15, Natural Gas, 2020 ...	Cum. Production	s. A-15, Übersicht Erdgas, ...	Kum. Förderung	s. A-15, Übersicht Erdgas, ...	Kum. Förderung
EnReserCBMBGR	Natural Gas Reserves in XXXX (year)	CBM	A-17, Natural gas reserves 2018	CBM: proved reserves	A-17, Natural gas reserves ...	CBM: proved reserves	A-17, Erdgasreserven 2021 (...	CBM, Reserven	A-17, Erdgasreserven 2022 (...	CBM, Reserven
EnReserGasBGR	Natural Gas in XXXX (year)	Reserves	s. A-15, Natural Gas, 2018 ...	Reserves	s. A-15, Natural Gas, 2020 ...	Reserves	s. A-15, Übersicht Erdgas, ...	Reserven	s. A-15, Übersicht Erdgas, ...	Reserven
EnReserShaleGasBGR	Natural Gas Reserves in XXXX (year)	shale gas	A-17, Natural gas reserves 2018	shale gas: proved reserves	A-17, Natural gas reserves ...	shale gas: proved reserves	A-17, Erdgasreserven 2021 (...	Schiefer Gas: Reserven	A-17, Erdgasreserven 2022 (...	Schiefer Gas: Reserven
EnResorCBMBGR	Natural Gas Resources in XXXX (year)	CBM	A-16, Natural gas resources...	CBM: ressources	A-16, Natural gas resources...	CBM: ressources	A-16, Erdgasressourcen 2021...	CBM, Ressourcen	A-16, Erdgasressourcen 2022...	CBM, Ressourcen
EnResorGasBGR	Natural Gas in XXXX (year)	Remaining Potential	s. A-15, Natural Gas, 2018 ...	Remaining Potential	s. A-15, Natural Gas, 2020 ...	Remaining Potential	s. A-15, Übersicht Erdgas, ...	Verbl. Potenzial	s. A-15, Übersicht Erdgas, ...	Verbl. Potenzial
EnResorShaleGasBGR	Natural Gas Resources in XXXX (year)	shale gas	A-16, Natural gas resources...	shale gas: resources	A-16, Natural gas resources...	shale gas: resources	A-16, Erdgasressourcen 2021...	Schiefer Gas, Ressourcen	A-16, Erdgasressourcen 2022...	Schiefer Gas, Ressourcen
EnResorTightGasBGR	Natural Gas Resources in XXXX (year)	tight gas	A-16, Natural gas resources...	tight gas: resources	A-16, Natural gas resources...	tight gas: resources	A-16, Erdgasressourcen 2021...	Tight Gas, Ressourcen	A-16, Erdgasressourcen 2022...	Tight Gas, Ressourcen
EnCumProdOilBGR	Crude Oil in XXXX (year)	Cum. Production	s. A-8, Crude oil, 2018 (Mt)	Cum. Production	s. A-8, Crude oil, 2020 (Mt)	Cum. Production	s. A-8, Übersicht Erdöl, 20...	Kum. Förderung	s. A-8, Übersicht Erdöl, 20...	Kum. Förderung
EnReserHeavyOilBGR	Crude Oil Reserves in XXXX (year)	extra heavy oil	A-10, Crude oil reserves 2018	extra heavy oil: proved reserves	A-10, Crude oil reserves 20...	extra heavy oil: proved reserves	A-10, Erdölreserven 2021 (Mt)	Schwerstöl, Reserven	A-10, Erdölreserven 2022 (Mt)	Schwerstöl, Reserven
EnReserOilBGR	Crude Oil in XXXX (year)	Reserves	s. A-8, Crude oil, 2018 (Mt)	Reserves	s. A-8, Crude oil, 2020 (Mt)	Reserves	s. A-8, Übersicht Erdöl, 20...	Reserven	s. A-8, Übersicht Erdöl, 20...	Reserven
EnReserOilSandsBGR	Crude Oil Reserves in XXXX (year)	oil sand	A-10, Crude oil reserves 2018	Oil Sand: Proved reserves	A-10, Crude oil reserves 20...	Oil Sand: Proved reserves	A-10, Erdölreserven 2021 (Mt)	Ölsandreserven	A-10, Erdölreserven 2022 (Mt)	Ölsandreserven
EnReserShaleOilBGR	Crude Oil Reserves in XXXX (year)	shale oil	A-10, Crude oil reserves 2018	shale oil: reserves	A-10, Crude oil reserves 20...	shale oil: reserves	A-10, Erdölreserven 2021 (Mt)	Schieferöl: Reserven	A-10, Erdölreserven 2022 (Mt)	Schieferöl: Reserven
EnResorHeavyOilBGR	Crude Oil Resources in XXXX (year)	extra heavy oil	A-9, Crude oil resources 2018	extra heavy oil: resources	A-9, Crude oil resources 20...	extra heavy oil: resources	A-9, Erdölressourcen 2021 (Mt)	Schwerstöl, Ressourcen	A-9, Erdölressourcen 2022 (Mt)	Schwerstöl, Ressourcen
EnResorOilBGR	Crude Oil in XXXX (year)	Remaining Potential	s. A-8, Crude oil, 2018 (Mt)	Remaining Potential	s. A-8, Crude oil, 2020 (Mt)	Remaining Potential	s. A-8, Übersicht Erdöl, 20...	Verbl. Potenzial	s. A-8, Übersicht Erdöl, 20...	Verbl. Potenzial
EnResorOilSandsBGR	Crude Oil Resources in XXXX (year)	oil sand	A-9, Crude oil resources 2018	oil sand: resources	A-9, Crude oil resources 20...	oil sand: resources	A-9, Erdölressourcen 2021 (Mt)	Ölsand, Ressourcen	A-9, Erdölressourcen 2022 (Mt)	Ölsand, Ressourcen
EnResorShaleOilBGR	Crude Oil Resources in XXXX (year)	shale oil	A-9, Crude oil resources 2018	shale oil: resources	A-9, Crude oil resources 20...	shale oil: resources	A-9, Erdölressourcen 2021 (Mt)	Schieferöl: Ressourcen	A-9, Erdölressourcen 2022 (Mt)	Schieferöl: Ressourcen

Note: Data in 2021 and 2022 were downloaded from https://www.bgr.bund.de/DE/Themen/Energie/Produkte/produkte_node.html?tab=Energiestudien