

FTSE Infrastructure Index Series Methodology Enhancement 2023

Executive summary

- FTSE Infrastructure Index Series measures the performance of infrastructure and infrastructure-related listed equity securities worldwide.
- Announced on 15 June 2023, effective with the September 2023 index review, the FTSE Infrastructure Index Series will be enhanced with certain ICB subsector additions and deletions.
- This document summarizes the implementation details of the methodology enhancement to the FTSE Infrastructure Index Series.



Contents

FTSI	E Infrastructure Index Series3
1.	What is FTSE Infrastructure Index Series?
2.	How does FTSE Russell define infrastructure? 4
3.	What is the methodology review process and frequency for the FTSE Infrastructure Index Series?4
4.	What is the enhancement and why? 4
5.	When will the FTSE Infrastructure Index Series adopt the enhancement? 6
6.	What supporting materials are available? 6
7.	What are the details of the addition? 6
8.	Why will only Alternative Electricity be added to FTSE Core Infrastructure Indices?
9.	How many companies will enter the FTSE Core Infrastructure Indices with the addition of ICB Subsector 65101010 Alternative Electricity? 7
10.	Which sector group within the FTSE Core Infrastructure (including 50/50 and Capped) Indices will Alternative Electricity fall into?
11.	What securities will be deleted as a result of the update to eligible ICB Subsectors?
12.	Can FTSE Russell provide a proforma estimate of the change? 8
13.	When and where will clients be able access the details of the upcoming index review changes? 10
14.	Will there be any effect on the Capped indices (50/50 and Capped)? 10 $$



Methodology enhancement FAQs

FTSE Infrastructure Index Series

1. What is FTSE Infrastructure Index Series?

The FTSE Infrastructure Index Series is designed to measure the performance of infrastructure and infrastructure-related listed equity securities worldwide. The series offers a variety of indices including the FTSE Core Infrastructure Indices (uncapped and capped versions) that include companies involved in the FTSE Russell-defined "core" infrastructure activities, as well as the FTSE Infrastructure Indices and FTSE Infrastructure Opportunities Indices that include companies involved in both core infrastructure and infrastructure-related activities.

The series consists of the following indices:

Available indices	FTSE Infrastructure	FTSE Infrastructure Opportunities	FTSE Core Infrastructure	FTSE Core Infrastructure (Capped)
Global	✓	✓	✓	50/50
Developed	✓	✓	✓	50/50
Emerging	✓	✓	✓	
Developed APAC				50/50
Developed Europe				Capped
USA				Capped

2. How does FTSE Russell define infrastructure?

FTSE Russell defines infrastructure as: companies that own, manage or operate structures or networks, which are used for the processing or movement of goods, services, information/data, people, energy and necessities from one location to another. The definition also includes the business that provide the means of conveyance and the conveyance itself, not the goods or services that are carried by the conveyance. This includes both the network (e.g. roads, bridges, tunnels, pipelines, wires, wireless, depots, ports, airports, etc.) and the actual "rolling stock" that conveys the goods, services, information/data, people, energy and necessities.

3. What is the methodology review process and frequency for the FTSE Infrastructure Index Series?

FTSE Russell reviews index methodologies regularly (at least once a year), considers feedback from index users, and evolution of markets to ensure that they continue to best reflect the objectives of the index series.

When reviewing the methodology of the FTSE Infrastructure Index Series, and based feedback from index users, FTSE Russell identifies ICB subsectors to consider for eligibility, based on the definition of infrastructure stated in the Ground Rules. With the evolution of the market and companies, some ICB subsectors may become newly-eligible for inclusion in the FTSE Infrastructure Index Series, while some may become obsolete and be removed from the eligible ICB subsectors list.

FTSE Russell shares with LPX Group the list of newly-identified ICB subsectors to be considered for eligibility for the FTSE Infrastructure Index Series. LPX Group then reviews the list and identifies potential eligible securities to test for core infrastructure activity and infrastructure-related activity. Based on the findings, LPX Group provides a recommendation as to whether or not the specific ICB subsectors can be added or not. FTSE Russell finalizes the list of eligible ICB subsectors after the assessment.

4. What is the enhancement and why?

As announced on 15 June 2023 (research.ftserussell.com/products/index-notices/home/getnotice/?id=2608311), effective with the September 2023 index review, the FTSE Infrastructure Index Series will be enhanced with certain ICB subsector additions and deletions.

The FTSE Infrastructure Index Series was launched in March 2011. Over the years, the infrastructure landscape has continued to evolve. For example, newer types of infrastructure, such as those related to alternative energy and digitalization, have emerged, while some like radio broadcasters have become less relevant.

To account for the evolution of the markets and to ensure that the FTSE Infrastructure indices continue to accurately represent the infrastructure and infrastructure-related markets, FTSE Russell worked with LPX Group, who is responsible for the fundamental research and infrastructure screening of the constituents of the FTSE Infrastructure Index Series, to (1) assess the newly-identified potential ICB subsectors and securities eligible for index inclusion, and (2) to validate FTSE Russell's assessment of ICB subsectors that have become less relevant from an infrastructure perspective.

As a result of the collaborative effort between FTSE Russell and LPX Group, the FTSE Infrastructure Index Series will expand the universe of eligible securities, effective with the September 2023 index review.

Specifically, the following ICB subsector additions and deletions will be reflected in the series at the upcoming index review:

Addition of ICB Subsectors:

ICB Code	ICB Subsector	FTSE Infrastructure	FTSE Infrastructure Opportunities	FTSE Core Infrastructure	FTSE Core Infrastructure (Capped)
65101010	Alternative Electricity	√	√	√	✓
50201010	Aerospace	✓	✓		
10101010	Computer Services	√	√		
10101020	Consumer Digital Services	√	√		
55101000	Diversified Materials	√	√		

Deletion of ICB Subsectors:

ICB Code	ICB Subsector	FTSE Infrastructure	FTSE Infrastructure Opportunities	FTSE Core Infrastructure	FTSE Core Infrastructure (Capped)
15102010	Cable Television Services	√	√	√	✓
40301035	Radio and TV Broadcasters	✓	✓	√	✓

5. When will the FTSE Infrastructure Index Series adopt the enhancement?

The addition and deletion of eligible ICB subsectors and securities will be reflected in the FTSE Infrastructure Index Series as of the September 2023 index review.

6. What supporting materials are available?

An updated copy of the FTSE Infrastructure Index Series Ground Rules (v3.5) is now available using the following link:

FTSE Infrastructure Index Series.pdf (ftserussell.com).

7. What are the details of the addition?

Based on the FTSE Global All Cap Index data as of 10 Mar 2023, LPX Group assessed a range of additional ICB subsectors for the possibility of expanding the existing eligible securities universe of the FTSE Infrastructure Index Series.

Five ICB subsectors and 30 potentially eligible securities were identified based on LPX Group's testing based on core and related infrastructure activities as defined by the FTSE Infrastructure Index Series.

Detailed findings provided by LPX Group as below:

ICB Subsector Code	ICB Subsector	# Co.1	Core Activity	Infrastructure-Related Activity
65101010	Alternative Electricity	78	Energy Core Infrastructure	
50201010	Aerospace	37		Infrastructure Related Materials & Engineering, Conveyance Services, and Communication Services

55101000	Diversified Materials	19	Infrastructure Related Materials & Engineering
10101010	Computer Services	180	Infrastructure Related Communication Services
10101020	Consumer Digital Services	105	Infrastructure Related Communication Services

Number of companies in the relevant ICB Subsector under the FTSE Global All Cap Index, as of 10 March 2023.

ICB			Market Cap ((US\$ mn) ¹
Subsector Code	ICB Subsector	# of Potential Securities ¹	Before investability weight	After investability weight
65101010	Alternative Electricity	92	59,059 ²	30,7152
50201010	Aerospace	<4	9,425	8,790
55101000	Diversified Materials	<5	22,767	11,683
10101010	Computer Services	<8	48,954	36,290
10101020	Consumer Digital Services	<4	9,879	3,579

Source: FTSE Russell and LPX Group; as of 18 April 2023.

8. Why will only Alternative Electricity be added to FTSE Core Infrastructure Indices?

ICB Subsector 65101010 Alternative Electricity was the only subsector to meet the criteria of core infrastructure activities as defined in Section 4.4 A-C in the FTSE Infrastructure Index Series Ground Rules.

9. How many companies will enter the FTSE Core Infrastructure Indices with the addition of ICB Subsector 65101010 Alternative Electricity?

At time of LPX Group's assessment on 18 April 2018, four (4) companies under ICB Subsector 65101010 Alternative Electricity were identified as potentially eligible for inclusion in the FTSE Core Infrastructure Indices. The combined market cap of the four companies, gross and net (after investability weight), was US\$25.7 billion and US\$12.7 billion, respectively, as of 18 April 2023.

 [#] of Potential Securities and Market Cap data represents companies with at least 20% of their revenues attributable to core or infrastructure-related activities.

Four (4) companies with at least 65% of their revenues attributable to core or infrastructure-related activities. The total market cap of these companies, before and after accounted for investability, was US\$25,697 million and US\$12,734 million, respectively, as of 18 April 2023.

10. Which sector group within the FTSE Core Infrastructure (including 50/50 and Capped) Indices will Alternative Electricity fall into?

ICB Subsector 65101010 Alternative Electricity falls into the Utilities group, as indicated in Section 4.2 in the <u>FTSE Infrastructure Index Series</u> Ground Rules.

11. What securities will be deleted as a result of the update to eligible ICB Subsectors?

As of 31 July 2023, 1 Emerging security within the FTSE Infrastructure Index Series is expected to be impacted by the deletion of two ICB Subsectors.

The impacted security is Elang Mahkota Teknologi, an Indonesian media company. The security was reclassified during the FTSE Quarterly ICB Classification Changes, effective 19 June 2023, from 15101010 (Telecommunications Equipment) to 40301035 (Radio and TV Broadcasters).

		No. of Constituents				
ICB Code	ICB Subsector	FTSE Infrastructure	FTSE Infrastructure Opportunities	FTSE Core Infrastructure	FTSE Core Infrastructure (Capped)	
15102010	Cable Television Services	0	0	0	0	
40301035	Radio and TV Broadcasters	1 ¹	11	0	0	

^{1.} Within the Global and Emerging indices only.

12. Can FTSE Russell provide a proforma estimate of the change?

Below are estimates of the impact to the FTSE Global Core Infrastructure Index and the FTSE Global Infrastructure Opportunities Index, based on index data as of 18 April 2023 and market cap (after investability weight) data cited in Question 7. Elang Mahkota Teknologi is removed from the pro-forma estimate of the FTSE Global Infrastructure Opportunities Index.

FTSE Global Core Infrastructure Index – pro-forma estimate:

ICB Subsector Code	ICB Subsector	Pro-forma weight
15101010	Telecommunications Equipment	0.5%
15102015	Telecommunications Services	2.0%
35102025	Infrastructure REITs	7.4%
40501015	Travel and Tourism	0.1%
50101010	Construction	0.1%
50206020	Railroads	17.7%
50206060	Transportation Services	5.5%
60101035	Pipelines	12.9%
65101015	Conventional Electricity	35.2%
65102000	Multi-utilities	10.9%
65102020	Gas Distribution	4.1%
65102030	Water	3.2%
65101010	Alternative Electricity	0.5%

FTSE Global Infrastructure Opportunities Index – pro-forma estimate:

ICB Subsector Code	ICB Subsector	Pro-forma weight			
15101010	Telecommunications Equipment	0.9%			
15102015	Telecommunications Services	19.9%			
35102025	Infrastructure REITs	3.2%			
40501010	Airlines	1.3%			
40501015	Travel and Tourism	0.2%			
50101010	Construction	3.2%			
50101015	Engineering and Contracting Services	2.1%			
50101030	Cement	3.0%			
50101035	Building Materials: Other	2.5%			
50205020	Professional Business Support Services	0.3%			
50206010	Trucking	1.7%			
50206020	Railroads	8.5%			
50206030	Marine Transportation	2.3%			
50206040	Delivery Services	5.0%			
50206060	Transportation Services	3.9%			
55102010	Iron and Steel	5.8%			
55102035	Aluminum	0.7%			
60101035	Pipelines	5.8%			
65101015	Conventional Electricity	18.8%			
65102000	Multi-utilities	5.4%			
65102020	Gas Distribution	2.1%			
65102030	Water	1.8%			
65101010	Alternative Electricity	0.5%			
50201010	Aerospace	0.2%			
55101000	Diversified Materials	0.2%			
10101010	Computer Services	0.6%			
10101020	Consumer Digital Services	0.1%			
	and top of house	4.00/			
Total weight of additional ICB Subsectors 1.6%					

13. When and where will clients be able access the details of the upcoming index review changes?

Subscribers to the FTSE Infrastructure Index Series product files will be able to access the indicative review files starting 2 weeks prior to the review effective date. Please refer to the FTSE Russell Index Review Timetable – 2023 (research.ftserussell.com/products/index-notices/home/getnotice/?id=2606831).

14. Will there be any effect on the Capped indices (50/50 and Capped)?

The methodology of the Capped indices remains unchanged.

With regard to the FTSE Core Infrastructure 50/50 indices, sector weight targets will remain 50% on the Utilities group, 30% on the Transportation Group and 20% on the Others group. Please refer to the FTSE Infrastructure Index Series Ground Rules (v3.5):

FTSE Infrastructure Index Series.pdf (ftserussell.com)

For more information about our indexes, please visit ftserussell.com.

© 2023 London Stock Exchange Group plc and its applicable group undertakings (the "LSE Group"). The LSE Group includes (1) FTSE International Limited ("FTSE"), (2) Frank Russell Company ("Russell"), (3) FTSE Global Debt Capital Markets Inc. and FTSE Global Debt Capital Markets Limited (together, "FTSE Canada"), (4) FTSE Fixed Income Europe Limited ("FTSE FI Europe"), (5) FTSE Fixed Income LLC ("FTSE FI"), (6) The Yield Book Inc ("YB") and (7) Beyond Ratings S.A.S. ("BR"). All rights reserved.

FTSE Russell® is a trading name of FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB and BR. "FTSE®", "Russell®", "FTSE Russell®", "FTSE4Good®", "ICB®", "The Yield Book®", "Beyond Ratings® and all other trademarks and service marks used herein (whether registered or unregistered) are trademarks and/or service marks owned or licensed by the applicable member of the LSE Group or their respective licensors and are owned, or used under licence, by FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB or BR. FTSE International Limited is authorised and regulated by the Financial Conduct Authority as a benchmark administrator.

All information is provided for information purposes only. All information and data contained in this publication is obtained by the LSE Group, from sources believed by it to be accurate and reliable. Because of the possibility of human and mechanical error as well as other factors, however, such information and data is provided "as is" without warranty of any kind. No member of the LSE Group nor their respective directors, officers, employees, partners or licensors make any claim, prediction, warranty or representation whatsoever, expressly or impliedly, either as to the accuracy, timeliness, completeness, merchantability of any information or of results to be obtained from the use of FTSE Russell products, including but not limited to indexes, data and analytics, or the fitness or suitability of the FTSE Russell products for any particular purpose to which they might be put. Any representation of historical data accessible through FTSE Russell products is provided for information purposes only and is not a reliable indicator of future performance.

No responsibility or liability can be accepted by any member of the LSE Group nor their respective directors, officers, employees, partners or licensors for (a) any loss or damage in whole or in part caused by, resulting from, or relating to any error (negligent or otherwise) or other circumstance involved in procuring, collecting, compiling, interpreting, analysing, editing, transcribing, transmitting, communicating or delivering any such information or data or from use of this document or links to this document or (b) any direct, indirect, special, consequential or incidental damages whatsoever, even if any member of the LSE Group is advised in advance of the possibility of such damages, resulting from the use of, or inability to use, such information.

No member of the LSE Group nor their respective directors, officers, employees, partners or licensors provide investment advice and nothing in this document should be taken as constituting financial or investment advice. No member of the LSE Group nor their respective directors, officers, employees, partners or licensors make any representation regarding the advisability of investing in any asset or whether such investment creates any legal or compliance risks for the investor. A decision to invest in any such asset should not be made in reliance on any information herein. Indexes cannot be invested in directly. Inclusion of an asset in an index is not a recommendation to buy, sell or hold that asset nor confirmation that any particular investor may lawfully buy, sell or hold the asset or an index containing the asset. The general information contained in this publication should not be acted upon without obtaining specific legal, tax, and investment advice from a licensed professional.

Past performance is no guarantee of future results. Charts and graphs are provided for illustrative purposes only. Index returns shown may not represent the results of the actual trading of investable assets. Certain returns shown may reflect back-tested performance. All performance presented prior to the index inception date is back-tested performance. Back-tested performance is not actual performance, but is hypothetical. The back-test calculations are based on the same methodology that was in effect when the index was officially launched. However, back-tested data may reflect the application of the index methodology with the benefit of hindsight, and the historic calculations of an index may change from month to month based on revisions to the underlying economic data used in the calculation of the index.

This document may contain forward-looking assessments. These are based upon a number of assumptions concerning future conditions that ultimately may prove to be inaccurate. Such forward-looking assessments are subject to risks and uncertainties and may be affected by various factors that may cause actual results to differ materially. No member of the LSE Group nor their licensors assume any duty to and do not undertake to update forward-looking assessments.

No part of this information may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the applicable member of the LSE Group. Use and distribution of the LSE Group data requires a licence from FTSE, Russell, FTSE Canada, FTSE FI, FTSE FI Europe, YB, BR and/or their respective licensors.

FTSE Russell 11

About FTSE Russell

FTSE Russell is a leading global index provider creating and managing a wide range of indexes, data and analytic solutions to meet client needs across asset classes, style and strategies. Covering 98% of the investable market, FTSE Russell indexes offer a true picture of global markets, combined with the specialist knowledge gained from developing local benchmarks around the world.

FTSE Russell index expertise and products are used extensively by institutional and retail investors globally. For over 30 years, leading asset owners, asset managers, ETF providers and investment banks have chosen FTSE Russell indexes to benchmark their investment performance and create investment funds, ETFs, structured products and index-based derivatives. FTSE Russell indexes also provide clients with tools for asset allocation, investment strategy analysis and risk management.

A core set of universal principles guides FTSE Russell index design and management: a transparent rules-based methodology is informed by independent committees of leading market participants. FTSE Russell is focused on index innovation and customer partnership applying the highest industry standards and embracing the IOSCO Principles. FTSE Russell is wholly owned by London Stock Exchange Group.

For more information, visit ftserussell.com.

To learn more, visit ftserussell.com; email info@ftserussell.com; or call your regional Client Service Team office:

EMEA

Asia-Pacific

+44 (0) 20 7866 1810

North America +1 877 503 6437

Hong Kong +852 2164 3333 Tokyo +81 3 6441 1430 Sydney +61 (0) 2 7228 5659

12 **FTSE Russell**