

The Hashemite Kingdom of Jordan
TELECOMMUNICATIONS REGULATORY COMMISSION



REGULATORY DECISION
ON
CHARGES FOR MOBILE INTERCONNECTION
SERVICES BASED ON TSLRIC+ MODELS

Board of Commissioners Decision No.19-13/2023 issued on 27/12/2023

1 Introduction

Since 2005, the Telecommunications Regulatory Commission (hereinafter, ‘TRC’) has shown its motivations to adopt a “*Total Service Long-Run Incremental Cost Plus*” (hereinafter, ‘TSLRIC+’) as the preferred mechanism for wholesale price setting in the Kingdom.

In September 2009, TRC published its “*Regulatory decision on the principles to be used in the construction of TSLRIC+ models for the costs of interconnection Services*”¹, which was later followed by the submission of the Hybrid TSLRIC+ models and the publication by TRC in 2011 of the regulatory decisions including its regulated wholesale charges for fixed and mobile interconnections services.

TRC has updated the Hybrid TSLRIC+ models and the applicable charges with new wholesale prices in 2017 and published the regulated wholesale charges in the two decisions presented below:

- Regulatory decision on charges for fixed interconnection services based on TSLRIC+ models
- Regulatory decision on charges for mobile interconnection services based on TSLRIC+ models

Having reached the end of the period reflected in the previous regulatory decisions (2021), TRC decided in 2022 to start a new wholesale price process to update the applicable charges. The industry was informed in late 2022 of the initiation of this process and was welcomed to participate throughout the process at different stages such as:

- Data gathering process
- Review and disclose Hybrid TSLRIC+ Models with relevant operators

As part of this process, TRC has updated its Hybrid TSLRIC+ models on the grounds of the methodology that was established in September 2009 to recognise the latest technological developments that have taken place in the market (e.g. introduction of 5G networks, gradual phasing out of 2G technology, massive take-up of FTTH services, growth in fixed and mobile data traffic).

Based on the modelling methodology that was laid out in the Decision, TRC received data from the following mobile network operators:

- Petra Jordanian Mobile Telecommunication Company (“Orange Mobile”);
- Umniah Mobile Company (“Umniah”);
- Jordan Mobile Telephone Services Company (“Zain”).

TRC carried out an extensive engagement with the operators, each being given the opportunity to comment on its own cost model and on the efficient operator variants. These models were accompanied by manuals that described their technical algorithms as well as their overall rationale. In finalising the models and using them to establish interconnection charges, TRC has carefully considered all of the comments and notes received from the operators in the construction of the TSLRIC+ models during the above-mentioned stages. All these comments

¹ Telecommunications Regulatory Commission “*Regulatory decision on the principles to be used in the construction of TSLRIC+ models for the costs of interconnection Services*”, Board of Commissioners Decision No (17-5/2009) issued on 27 September 2009, amended on 18 November 2009.

and the related actions taken by TRC are reflected in the Explanatory Memorandum enclosed to this Decision.

This Regulatory Decision is issued pursuant to the Telecommunications Law, which empowers TRC to regulate interconnection and the relevant rates and charges, as well as to the latest Market Review Decision², Interconnection Instructions³, and *TSLRIC+ models' principles*⁴.

² Telecommunications Regulatory Commission, “Regulatory Decision on the Mobile Markets Review”, 30 September 2020 (TRC Board Decision No. 6-12/2020), and amended by TRC Board Decision No. 15-1/2021 dated 31 January 2021.

³ Telecommunications Regulatory Commission, “Interconnection Instructions”, 5 January 2005 (TRC Board Decision No. 2-1/2005) and its amendments issued on 15 June 2010 (TRC Board Decision No. 18-11/2010).

⁴ Telecommunications Regulatory Commission “*Regulatory decision on the principles to be used in the construction of TSLRIC+ models for the costs of interconnection Services*”, Board of Commissioners Decision No (17-5/2009) issued on 27 September 2009, amended on 18 November 2009.

2 The TSLRIC+ Models and Implementation

TRC has followed the TSLRIC+ modelling methodology described in the Decision 17-5/2009. This is a “hybrid” methodology meaning that the models were created through a process of reconciliation and calibration of bottom-up models with operators’ internal data.

The TSLRIC+ models have been constructed using the principles set out in the Decision. At each stage, TRC has worked closely with the industry in constructing the models. In order to maintain commercial confidentiality, the operator-specific models have only been disclosed to the relevant operator, along with the efficient-operator model.

The initial models have been amended by TRC in light of comments received, and the resulting models have been used to develop the efficient-operator models.

3 Interconnection charges

Interconnection charges for the following services provided by mobile operators are determined by TRC in this Decision, based on the results from the efficient mobile TSLRIC+ model:

- National Call termination
- Directory Enquiries
- Emergency Calls
- Operator Assistance
- Customer sited interconnect link port – Microwave
- Customer sited interconnect link port – Fibre
- Interconnect link extension port
- Operator sited interconnect link port
- Collocation and Infrastructure Sharing Service (for base station)
- Duct and Dark Fibre sharing
- Billing and Collection Service
- SMS National Termination Service

The full set of interconnection charges for mobile services determined by TRC in this Decision is shown in Annex A.

The Interconnection charges set out in this Decision shall apply from 1st January 2024 till 31 December 2027, After 3 years, if necessary, TRC intends to undertake a review of the TSLRIC+ models and, if deemed convenient, will work with the industry to update the TSLRIC+ models. In general, TRC will monitor market conditions and, if justified, may update the forecasts and key assumptions in the TSLRIC+ models.

4 Implementation of LRIC-based Interconnection Charges

TRC Decision 17-5/2009 established the guidelines on how the TSLRIC+ models would be used by TRC to set charges for regulated interconnection services. These guidelines were not exhaustive and left open the possibility that TRC may consider other factors that are relevant at the time of each Regulatory Decision.

TRC has determined that the final mobile interconnection costs calculated by the models for the 2024-2027 period are sufficiently close together, given the uncertainty about future market growth, cost changes and other factors, that one set of charges can be implemented. This set of charges is based on the outcomes of the efficient operator model. That is, TRC has determined to set symmetric charges on all operators for the 2024-2027 period.

The approach adopted by TRC when setting the new regulated charges is described below:

1. When the new charges were considered to be close to the previous ones and/or the regulated services under consideration were not material under the current market situation, a fixed charge has been set for the 2024-2027 period, which is extracted as the average of the efficient operator model's results for the relevant period.
2. When the new charges were considered not to be close to the previous ones and the regulated services under consideration were material under the current market situation, a glide path has been defined so as to smooth the impact on the market of this Decision.

Annex A- Interconnection charges for mobile services

National Call Termination

Rate per minute (fils)	2024	2025	2026	2027
Blended	1.55	1.11	0.66	0.21

Directory Enquiries

Rate per minute (fils)	2024	2025	2026	2027
Blended	54.8	54.8	54.8	54.8

Emergency calls

Rate per minute (fils)	2024	2025	2026	2027
Blended	1.2	1.2	1.2	1.2

Operator Assistance (including Call Connection Services)

Rate per minute (fils)	2024	2025	2026	2027
Blended	54.8	54.8	54.8	54.8

Customer sited interconnect link port – Microwave

JD per E1 per hop	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	2.7	2.7	2.7	2.7

JD per 16E1 per hop	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	4.5	4.5	4.5	4.5

JD per 48E1 per hop	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	19.3	19.3	19.3	19.3

JD per STM-1 per hop	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	32.6	32.6	32.6	32.6

JD per STM-4 per hop	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	43.4	43.4	43.4	43.4

JD per STM-16 per hop	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	57.9	57.9	57.9	57.9

JD per STM-64 per hop	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	94.9	94.9	94.9	94.9

JD per Fast Ethernet link per hop	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	7.5	7.5	7.5	7.5

JD per Gigabit Ethernet link per hop	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	8.8	8.8	8.8	8.8

JD per 10 Giga Ethernet link per hop	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	15.3	15.3	15.3	15.3

Customer sited interconnect link port – Fibre

JD per E1	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	2.7	2.7	2.7	2.7

JD per E3	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	4.5	4.5	4.5	4.5

JD per DS3	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	6.9	6.9	6.9	6.9

JD per STM-1	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	32.6	32.6	32.6	32.6

JD per STM-4	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	43.4	43.4	43.4	43.4

JD per STM-16	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	57.9	57.9	57.9	57.9

JD per STM-64	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	94.9	94.9	94.9	94.9

JD per Fast Ethernet link	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	7.5	7.5	7.5	7.5

JD per Gigabit Ethernet link	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	8.8	8.8	8.8	8.8

JD per 10 Giga Ethernet link	2024	2025	2026	2027
Port installation	8.1	8.1	8.1	8.1
Monthly rental (port)	15.3	15.3	15.3	15.3

Interconnect link extension port

The charges for Customer sited interconnect link port services listed above shall apply here to the installation and rental port charges.

Operator sited interconnect link port

The charges for Customer sited interconnect link port services listed above shall apply here to the installation and rental port charges.

Collocation and Infrastructure Sharing (for base station)

JD per month	2024	2025	2026	2027
Outdoor space (Average space of 5 m ²)/ Rental per 3 antennas of the tower per m ²	374.3	374.3	374.3	374.3
Power supply/ minimum cost [<2000 Kwh/month]	41.9	41.9	41.9	41.9
Power supply/ minimum cost [>2000 Kwh/month]	9.1	9.1	9.1	9.1
Indoor space (Average space of 3 m ²)/ Rental per m ²	303.9	303.9	303.9	303.9

JD per month	2024	2025	2026	2027
Sharing of space in towers	118.0	118.0	118.0	118.0

Duct and Dark Fibre sharing

JD/metre	2024	2025	2026	2027
Installation	0.72	0.72	0.72	0.72
1 pair of dark fibre monthly rental / 1 metre	0.39	0.39	0.39	0.39
Duct monthly rental / 1 metre	0.25	0.25	0.25	0.25

Billing and Collection Service

Billing (JD/bill)	2024	2025	2026	2027
Billing and collection	1.0	1.0	1.0	1.0

SMS National Termination Service

(Fils/SMS)	2024	2025	2026	2027
SMS	0.22	0.22	0.22	0.22