

	DOC. CODE	PROJECT	AREA	DEPARTMENT	DISCIPLINE	DOC.TYPE	DOC.NO	REV.	
		NAS	KH	RE	EL	DBM	145	00	
	NasirAbad 6MW Solar Power Plant Project								
ATTACHMENT	DC SOLSR CABLE BOM							PAGE	
YES								1 OF 4	

DOCUMENT TITLE:

DC SOLAR CABLE BOM

REV.	ISSUE PURPOSE	ISSUE DATE	DEVELOPED BY	CHECKED BY	APPROVED BY
00	FI	04/11/27	S.DELFANI	S.DELFANI	S.DELFANI

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1. MATERIAL REQUISITION–SOLAR CABLE

Project Name: 6 MW Solar Power Plants (IRANTRANSFO)
Location: Zanzan Province, Khoramdareh County, Nasirabad Village

1.1. Scope of Supply

This document has been prepared for the purchase order of photovoltaic cables for the 6 MW Nasirabad solar power plant.

2. BILL OF QUANTITIES (MATERIAL TAKE-OFF)

Description	Length (m)	Cable Type
TOTAL	50.000	1×6 mm ²

3. TECHNICAL STANDARDS & REQUIREMENTS

➤ Applicable Standards

- IEC 62930 – Electric cables for photovoltaic systems (DC side)
- EN 50618 – Electric cables for photovoltaic systems (H1Z2Z2-K type)
- TÜV 2 PfG 1169 – TÜV specification for PV cables
- IEC 60228 – Conductors of insulated cables (Class 5 flexible copper conductor)
- IEC 60332-1-2 – Flame propagation test
- IEC 61034 – Measurement of smoke density
- IEC 60754-1 – Halogen acid gas test

➤ Cable Type

H1Z2Z2-K, 1×6 mm² Copper Flexible DC Solar Cable

➤ Electrical Characteristics

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- Rated Voltage: 1.5 kV DC
- Test Voltage: 15kV AC 50Hz
- Conductor: Tinned copper, Class 5 flexible
- Conductor Resistance: As per IEC 60228
- Temperature Rating:
 - -40°C to +90°C (continuous)
 - Max. 120°C conductor temperature

➤ Insulation & Sheath

- Insulation: Cross-linked polyolefin (XLPO)
- Sheath: Halogen-free, flame-retardant, UV-resistant compound
- Color: Black (UV resistant)
- Double insulation suitable for direct outdoor installation

➤ Mechanical & Environmental Properties

- UV resistant
- Ozone resistant
- Weather resistant
- Suitable for direct burial (if required)
- Oil resistant
- Abrasion resistant

➤ Fire Performance

- Flame retardant according to IEC 60332-1-2

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- Low smoke emission

- Halogen free (LSZH)

➤ Installation Requirements

- Suitable for fixed installation in PV arrays
- Compatible with MC4 connectors
- Minimum bending radius: $\geq 4 \times$ cable diameter
- Designed for rooftop and ground-mounted solar plants

➤ Spare Policy

Spare cable quantity shall be considered 5% of the total required installed length.