

# Upcoming Tenders at CERN Holland@CERN

**Lisa Bellini-Devictor** 

Head of Procurement for Administration and Infrastructure

25 June 2021





## **Current project - HL-LHC Dedicated web page for industry**

#### **Building the HL-LHC with the Industry**

The HL-LHC Industry Website has been specially designed for all those firms that wish to participate in this ambitious project. We want to share all the relevant information related to the procurement that will be required to accomplish this major upgrade of the LHC.

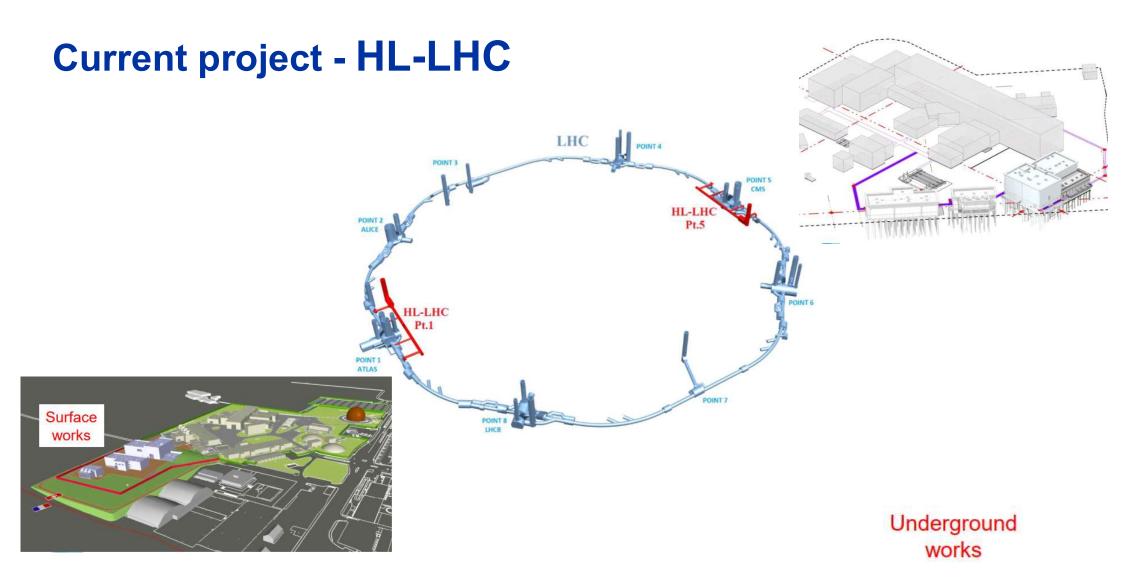
The industry will have a crucial role and will be heavily involved within the HL-LHC Project since it will be the main source to provide the technologies and equipment that are required to successfully achieve the goals of this upgrade of the LHC.

The HL-LHC will collaborate with many types of industries and businesses to pursue its goals. Knowledge and technology to be developed during the HL-LHC project will make a lasting impact on society.



https://project-hl-lhc-industry.web.cern.ch/







### **HL-LHC**

#### LHC / HL-LHC Plan LHC Run 3 Run 1 Run 2 LS1 13 - 14 TeV EYETS **EYETS** LS2 13 TeV **Diodes Consolidation** splice consolidation cryolimit interaction 7 TeV 8 TeV LIU Installation HL-LHC inner triplet button collimators installation Civil Eng. P1-P5 radiation limit regions R2E project 2016 2018 2020 2025

2 x nominal Lumi

DEFINITION

experiment

beam pipes

75% nominal Lumi

nominal Lumi



**EXCAVATION** 

ATLAS - CMS upgrade phase 1

ALICE - LHCb

upgrade

2 x nominal Lumi

BUILDINGS

LHC/ HL-LHC Plan (last update January 2021)



HL-LHC

LS3

2026

ATLAS - CMS

HL upgrade

Run 4 - 5...

14 TeV

2040 5 to 7.5 x nominal Lum

## **HL-LHC** – upcoming **MS** announced

Market Survey documents not yet dispatched – express interest and you wil receive the invitation to answer the MS

14-06-2021	Supply	New MS- 4666/EN/HL/LHC		CERN intends to place a contract for the supply and installation Interested firms shall have a proven experience and competence in the	Read More	А	Third quarter 2021	To express an interest please send an e-mail to <u>procurement.service@cern.ch</u> Technically: <u>C. Bertone</u> Commercially: <u>F. Bonthond</u>
08-06-2021	Supply	Mew MS- 4690/SY/HL-LHC	Digitizer for HI-LHC (03040100, 03050100, 03500200)	CERN intends to place a contract for the supply of Interested firms shall have a proven experience and competence in the	Read More	А	Third quarter 2021	To express an interest please send an e-mail to <u>procurement.service@cern.ch</u> Technically: <u>N. Beev</u> Commercially: <u>D. Schoerling</u>
25-02-2021	Supply	MS- 4678/SY/HL/LHC	Supply of 36 power converters of ±2000 A and ±10 V for CERN'S LHC	CERN intends to place a contract for the supply of Interested firms shall have inhouse facilities for the production and testing	Read More	В		Market Survey documents  ✓

Market Survey documents already dispatched – You can still express interest by calling the procurement officer – may still be possible to answer the MS



#### All starts with an email...

Dear Sir, Madam,

CERN invites you to submit a bid for the above mentioned supply and asks you to acknowledge receipt of this e-mail by replying to the sender.

#### 1. Downloading the price enquiry documents:

All the documents forming part of the price enquiry are available via the CERN e-tendering application at the following URL: https://cds.cern.ch/record/XXXX. Please ensure that when you click on the above link, the complete URL appears in the URL address window.

In order to access the price enquiry documents, bidders must have a CERN account with a password. Bidders who do not have an account will have to create one by clicking on the following link: <a href="https://account.cern.ch/account/Externals/RegisterAccount.aspx">https://account.cern.ch/account/Externals/RegisterAccount.aspx</a>. The email address to be indicated in the form as requested shall be the one used by CERN to send you the present message.

#### 2. Uploading your bid:

All the documents forming part of your bid shall be uploaded on the CERN e-tendering application at the following URL: <a href="https://cds.cern.ch/record/XXX">https://cds.cern.ch/record/XXX</a> no later than DATE – 4:00 pm (Expressed in Europe/Zurich time zone). The uploading of your bid may take time therefore we advise you to start uploading your bid in the CERN e-tendering application at least one hour before the time limit.

By uploading its bid to CERN's e-tendering application, the bidder confirms it has taken note of all documents available under the e-Tendering platform for the price enquiry concerned.

The available tender form forms part of this price enquiry shall be completed and signed by the bidder's authorized representative, as well as any other document to be returned to CERN.

Unless explicitly stated otherwise by CERN, bids shall, in no event, be sent by post, e-mail or fax. CERN will only accept bids that have been submitted via its e-tendering application.

The uploading of your bid is complete when you receive a confirmation on the e-tendering screen and an e-mail confirmation including the URL of your submission. Please keep this URL for your records and note that you have the possibility to make modifications to your bid by clicking on this URL until the submission deadline.

Failure to follow the instructions specified in this e-mail may lead to the disqualification of the bidder.

In case you do not intend to submit a bid, please inform us, at your earliest convenience, by using the button [Decline] in the CERN e-tendering application at the following URL: https://cds.cern.ch/record/XXXX

If you have any problems or enquiries regarding the registration of your firm, the download of price enquiry documents or upload of your bid please contact procurement.service@cern.ch

Yours faithfully,

Procurement Service
CERN European Organization for Nuclear Research
CH-1211 Geneva 23
Tel: +41 22 767 00 85

http://procurement.web.cern.ch/



To ensure our emails reach your inbox please add our email **procurement@cern.ch** to your safe senders and check your spam filter settings.



#### Supply of Shielded Mobile doors for HL-LHC underground facilities

MS-4666/EN/HL-LHC

Procurement Code: 01 02 04 16

**Cost Range:** A

Planning: MS: Q3 2021 / IT: Q4 2021

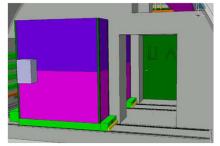
**Description and Specific Condition:** 

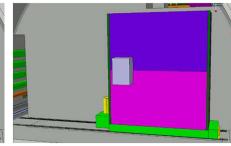
Supply of 8 shielded mobile doors to be installed in the HL underground facilities in YETS 2022-2023.

Supply of motorized basement and installation in situ: 4 doors in Switzerland (Meyrin-ATLAS) and 4 doors in France (Cessy-CMS).

The shielding will be procured and delivered by another contractor. It will be fixed by the supplier on the motorized basement before the commissioning tests.

Contact: caterina.bertone@cern.ch





#### Supply of 110 HPM7177 Digitizers for HL-LHC

MS-4690/SY/HL-LHC

**Procurement Code:** 03 04 01 00, 03 05 01 00, 03 50 02 00

**Cost Range:** A

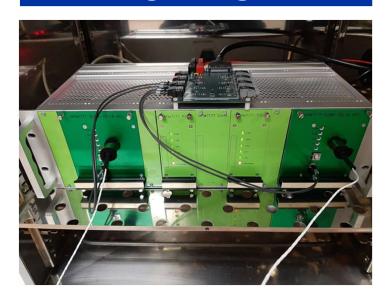
Planning: MS: Q3 2021 / IT: Q4 2021

**Description and Specific Condition:** 

Supply of 110 Digitizers for HL-LHC (HPM7177 – CERN design):

- 110 analog to digital converter units (ADCs)
- 110 power supply units
- 55 19-inch chassis units

## Contact: nikolai.beev@cern.ch@cern.ch



#### **Supply of Power Converters for HL-LHC Project**

Procurement Code: 02.10.00.00

Cost Range: A, B

Planning: several processes MS: Q2 /end 2021 / IT: end 2021/2022

#### **Description and Specific Condition:**

Low Voltage Power: 657 Power Converters

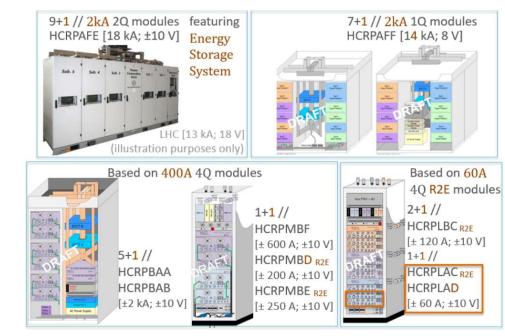
Designed by CERN => Build to print

Very high current: HL-LHC 18kA-10V: 6 units + HL-LHC14kA-08V: 10 units

High current: HL-LHC 2kA-10V: 36 units - MS-4678/SY/HL-LHC (dispatched)

Medium current: HL-LHC 600A-10V: 26 units (MS: end 2021, not yet announced)

Low current: R2E-HL-LHC120A-10V: 136 units + R2E-HL-LHC60A-10V: 442 units





#### **Construction of Electrical Substation LHC P5 (CMS)**

Contact: stephano.bertolasi@cern.ch

**Procurement Code:** 02.01.00.00; 02.02.00.00;

02.70.00.00

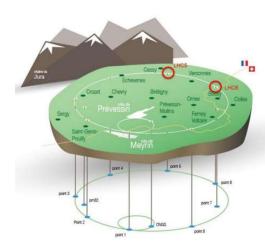
**Cost Range:** C

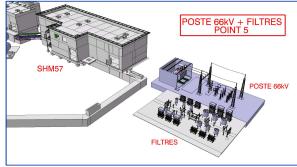
Planning: MS: Q1 2022 - IT: Q3 2022

#### **Description and Specific Condition:**

66/18 kV substation - 38 MVA transformer to accommodate the increased requirement at Point 5 for HL-LHC facilities

MS + IT : Turnkey contract for the supply, installation, testing and commissioning of the new electrical 66/18 kV substation located on the French part of the CERN site, at Point 5 and option for extension of existing substation at Point 6 .







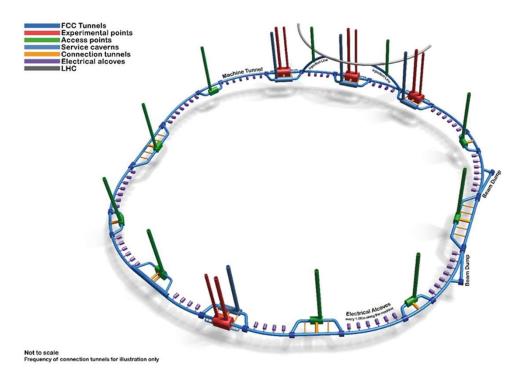
## Future project – Future Circular Collider



The FCC study prepared a conceptual design of a 100km long ring accelerator, that uses CERN's existing accelerator infrastructure. (Image: CERN)

- The FCC study launched as a result of the recommendations made in the 2013 update of the European Strategy for Particle Physics.
- Since then, the CERN civil engineering team has been studying the feasibility of a tunnel in the range of 100 km in the Geneva region.
- A Conceptual Design Report (CDR) published in January 2019, to feed in to the update of the 2020 European Strategy for Particle Physics. More information about the FCC feasibility studies is available in the CDR volumes accessible at <a href="https://fcc-cdr.web.cern.ch/">https://fcc-cdr.web.cern.ch/</a>

## Future project – Future Circular Collider



3D schematic of FCC underground structures for baseline design

As part of the current feasibility studies and identification of any showstopper in the construction of such tunnel

FCC site investigation works for the proposed 100 km ring will be carried out in three phases:

- High-Risk Areas Site Investigations (HRASI) (2021-2024)
- Main Site Investigations (2025-2027)
- Additional Site Investigations upon Project decision in 2027

Tender process for the delivery of High Risk Areas investigation work should be initiated in 2022 – will be announced on CERN Procurement Website



## Collaboration partners wanted: HFM program

- High-field superconducting magnets (HFM) are a key technology for future accelerators, and can have a significant impact also on societal applications such as thermonuclear fusion, ultra-high-field magnetic resonance imaging (MRI), medical accelerators, other medical applications such as gantries, etc.
- This HFM R&D programme will be carried out within an expanded collaboration with research laboratories, institutes and industry in the Member States and beyond.

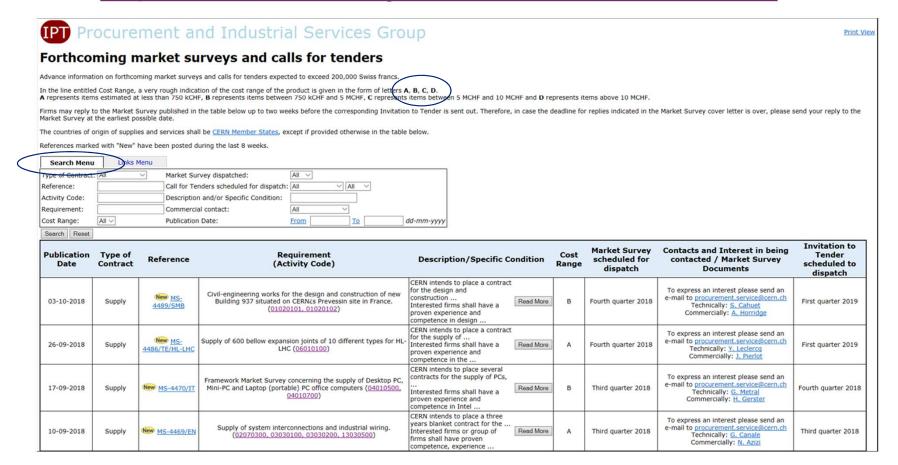
 A significant amount of the budget will be invested in industrial procurement and collaborations with European institutes.





## **CERN Shopping List**

#### https://found.cern.ch/java-ext/found/CFTSearch.do



Projects of an estimated value exceeding 200 kCHF



### **MS-4479/TE/LHC**

### Supply of a central beryllium chamber for the Atlas Experiment

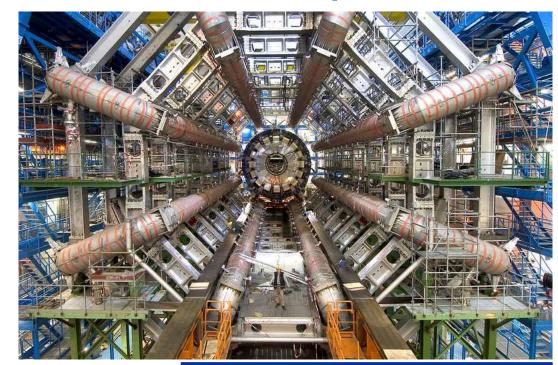
Procurement Code: 06.01.02.03

**Cost Range:** B

Planning: MS: Sent / IT: Q4 2021

#### **Description and Specific Condition:**

The beryllium chamber shall have the following characteristics: cylindrical vacuum chamber ID = 47mm, L = 7300 mm made from beryllium (S-200-F; 98.5% of Be) and equipped with special minimised aluminium flanges.



Contact: Josef.Sestak@cern.ch

## MS-4643/EN Supply of water cooled cables

Contact: davide.de.luca@cern.ch

**Procurement Code:** 02.05.05.00

Cost Range : B

**Planning:** MS: Q3 2021 / IT: Q4-21/Q2-22

## 500 mm2 Lug - water entrance 1/4" gas

#### **Description and Specific Condition:**

Flexible water cooled cables of section 500 to 2000mm2, with rad hard hoses according to **IS23** 

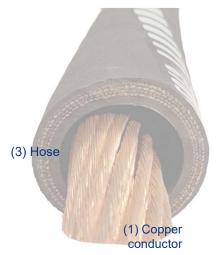
Required for current and future CERN projects: FRESCA 2, IT STRING TEST, HL-LHC

Terminals included in the supply shall be mounted

Complete link shall be tested under water pressure by the supplier

Interested firms shall have a proven experience and competence in the design and manufacturing of supply of cables with special rad hard hoses.

25/06/2021





### **MS-4600/EN**

Design and implementation of Industrial Controls and Personnel Safety Systems upgrades

Procurement Code: 10 11 02 00

**Cost Range:** D

Planning: MS: Q3 2021 / IT: Q4-21/Q2-22

#### **Description and Specific Condition:**

Blanket purchase contract for six years, for design and implementation and maintenance of Industrial Control systems and in particular studies and upgrades to safety systems, especially in the domain of personnel Protection for RUN3 and LS3

The supply consists in large-scale industrial controls, monitoring and safety systems and the maintenance of existing ones to protect personnel working in the accelerator infrastructure and underground facilities from the accelerators hazards linked to radioactivity, X-rays, lasers, electricity and cryogenics

Contact: rui.nunes@cern.ch



## Other upcoming tender opportunities (not HL-LHC)

Opportunities for the CERN Stores (Industry off the shelf or CERN standard items):

- Supply of stainless steel 3D forged blanks in stainless steel (EN 1.4429 AISI 316 LN) for Ultra-High Vacuum applications
   MS-4656/SCE dispatched on 16 March (Cat B)-still opened
- Supply of woods products for engineering and construction applications MS-4657/SCE to be dispatched (Cat A)
- Supply of Power Distribution Units (PDU) 250V for 19-inch racks
   MS: Q2 2021 (Cat A)



## Thank you



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