

CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE**Hydrocarbon Sector Skill Council**

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Name and address of submitting body:**Hydrocarbon Sector Skill Council**9th Floor, 18-20, Hindustan Times House,
KG Marg, Barakhamba, New Delhi, Delhi 110001**Name and contact details of individual dealing with the submission****Name:** Vishal Sharma**Position in the organisation:** Manager-Affiliation and Training**Address if different from above:** Same as above**Tel number(s):** 011-40244649**E-mail address:** vishalsharma@hsscindia.in**List of documents submitted in support of the Qualifications File**

1. Hydrocarbon Sector Profile (Annexure-1)
2. Qualification Pack- Excavator-Pipeline (Annexure-2)
3. Model Curriculum (Annexure-3)
4. Occupational Map – Hydrocarbon Sector (Annexure-4)
5. Communication from MoP&NG on CGD Scheme preparation (Annexure-5)
6. Composition of HSSC Industry Task Force & City Gas Distribution (CGD) committee (Annexure-6)
7. Copy of letter from HSSC to CGD entities for inclusion of suitable clause in their agreements with contract vendors for engaging skill certified manpower (Annexure-7)
8. Industry Validation/Communication (Annexure-8)

Model Curriculum to be added which will include the following:

- **Indicative list of tools/equipment to conduct the training**
- **Trainers qualification**
- **Lesson Plan**

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- **Distribution of training duration into theory/practical/OJT component**

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SUMMARY

1	Qualification Title	Excavator-Pipeline
2	Qualification Code, if any	HYC/Q6304
3	NCO code and occupation	NCO-2015/8342.9900
4	Nature and purpose of the qualification (Please specify whether qualification is short term or long term)	Learners after attaining the skill training on Qualification Pack (QP) of Excavator-Pipeline will be competent to perform the job of excavation and earth backfilling for laying oil and gas pipeline. It's a Qualification Pack (QP) for Short-Term Training (STT) program. The purpose of the Qualification is to provide skill training to the people to work in Hydrocarbon Sector and upskilling of the people, who are already working in this trade in the sector
5	Body/bodies which will award the qualification	Hydrocarbon Sector Skill Council
6	Body which will accredit providers to offer courses leading to the qualification	Hydrocarbon Sector Skill Council
7	Whether accreditation/affiliation norms are already in place or not, if applicable (if yes, attach a copy)	Yes
8	Occupation(s) to which the qualification gives access	Operations-Oil & Gas pipeline
9	Job description of the occupation	The individual in this job is responsible for manual excavation work involved in laying oil and gas pipeline and earth backfilling in accordance with safe working practices, plans and approvals. The individual will also check and identify hazard prone areas before starting excavation work for minimising the possible hazards to people and the surrounding environment due to excavation work.
10	Licensing requirements	NA
11	Statutory and Regulatory requirement of the relevant sector (documentary evidence to be provided)	NA

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12	Level of the qualification in the NSQF	Level 2	
13	Anticipated volume of training/learning required to complete the qualification	124 Hours	
14	Indicative list of training tools required to deliver this qualification	Hoe, Trench shovel, Rammers, Air compressor, Water pump, Torque wrenches, Cold cutters, Pipe stands, Line up clamps – various sizes, Crow bar, Combination plier, Regular plier, Water pump plier, Adjustable Pipe wrench, Claw hammer, Ball peen hammer, Soft mallet hammer	
15	Entry requirements and/or recommendations and minimum age	Class V or Basic Literacy and Numeracy	
16	Progression from the qualification (Please show Professional and academic progression)	NA	
17	Arrangements for the Recognition of Prior learning (RPL)	Yes	
18	International comparability where known (research evidence to be provided)	NA	
19	Date of planned review of the qualification.	16/08/2023	
20	Formal structure of the qualification		
	Mandatory components		
	Title of component and identification code/NOSs/Learning outcomes	Estimated size (learning hours)	Level
(i)	1. Introduction to hydrocarbon Sector (Bridge Module) 2. HYC/N6307 Perform excavation work for laying pipeline 3. HYC/N9301 Working effectively in a team 4. HYC/N9302 Maintain health, safety and security procedures	1. 08 2. 52 3. 24 4. 40	2

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	Sub Total (A)	124	2
	Optional components		
	Title of component and identification code/NOSs/ Learning outcomes	Estimated size (learning hours)	Level
	Sub Total (B)		
<u>Total (A+B)</u>		124	2

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SECTION 1 **ASSESSMENT**

21	<p>Body/Bodies which will carry out assessment:</p> <p>Bodies/Bodies empanelled by Hydrocarbon Sector Skill Council for conducting the assessment will carry out the assessment of learners.</p>
22	<p>How will RPL assessment be managed and who will carry it out?</p> <p>Under the Recognition of Prior Learning (RPL), the candidates enrolled and the assessment will be carried out as per the assessment criteria and assessment outcome of the full Qualification and the process of assessment will be carry out by the body/bodies empanelled by Hydrocarbon Sector Skill Council</p> <p>In RPL, the candidate already has the skills and knowledge while working on the job from long, the learners only requires to undergo a brief orientation training and the subsequent assessment process and certification is awarded to those candidates who successfully clears the assessment. The tentative process of RPL would include the flowing stages:</p> <ol style="list-style-type: none">1 Cluster Mapping and Mobilisation of the candidates2 Counselling & Pre-Screening4 Candidate registration, batch creation and enrolment5 conduction of an orientation program for candidates before assessment7 Assessment by HSSC8 Evaluation of Assessment Result9 Issuance of the Certificate to successful candidates
23	<p>Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, reliable and fair and show that these are in line with the requirements of the NSQF.</p> <p>The assessment of candidates/trainees will be on the basis on assessment outcome/assessment criteria of the Qualification. In the assessment criteria for each NOS marks have been defined for theoretical and practical skills, on which the candidate will be assessed. The emphasis is on 'learning-by-doing' and performance criteria is based on the practical demonstration of skills and knowledge.</p> <p>Theory/Knowledge test – This section will test the trainee on his/her knowledge on the subject/trade. The test will be carried out online/offline with a set of random Question paper. that include multiple choice questions in multilingual, True/False Statement, audio-video question etc.</p> <p>The Question Bank will be developed by Subject Matter Experts (SME)</p>

of the hydrocarbon sector and these questions again be vetted by the Industry Experts, each performance criteria have its marks for theory based on the level of question i.e. easy, medium and difficult.

Practical/Demonstration Test – This stage involves the face to face interaction between Assessor and each trainee. The practical knowledge will be tested through trade test which demonstrates the skill required for the job, by which assessor would be able to evaluate the trainee for his/her practical knowledge on respective Qualification. To ensure the maximum possible consistency in the assessment by different assessors at different locations, orientation of the assessors is also required about the stages involved in the assessment and the assessor role in the assessment process. The assessor must have knowledge of the following concepts before assessment:

- Qualification Pack Structure
- Guidance for the assessor to conduct theory and practical assessments
- Guidance for trainees to be given by assessor before the start of the assessments.
- Guidance on assessments process, practical brief with steps of operations practical observation checklist
- Practical/Demonstration Test guidance for uniformity and consistency.
- Guidance on assessment evidence collection (signed attendance copy, verification of the authenticity of the candidate by checking the photo ID card, Photographs-while assessment undergoing etc.)

The empanelled assessment agencies will be instructed to hire assessors with integrity, reliability and fairness. Each assessor shall sign a document with its assessment agency by which they commit themselves to comply with the rules of confidentiality and conflict of interest, independence from commercial and other interests that would compromise impartiality of the assessments. The assessment agencies are instructed to Ideally have assessor with sufficient amount of relevant industry experience related to Qualification. The assessors will also have scrutinized and have to undergo orientation of assessment framework, competency-based assessments etc.

Assessment strategy:

- For each Qualification Pack assessment criteria has been developed, which describe the weightage for each NOS/Performance criteria (PC) and assigned marks based on each NOS separately for theoretical and practical skills
- The question bank will be developed by the subject matter experts to assess the theoretical and practical knowledge.
- The accredited assessment agency will carry out the assessment process on the date proposed after completion of the training. The

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	<p>assessment will be carried out on the basis of the two parameters i.e. Theoretical test and Practical test.</p> <ul style="list-style-type: none">• The result of the assessment will be shared by assessment body to the HSSC for review and compliance, after that result will be processed and certificates will be generated• Assessments shall be conducted in the regional languages in case of any specific requirement from the concerned Training Provider.• For ensuring the impartial assessment it will be ensured that the Assessment Bodies (AB) are not involved in any type of training delivery with respect to this project.
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Please attach most relevant and recent documents giving further information about assessment and/or RPL.

Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

ASSESSMENT EVIDENCE

Complete a grid for each component as listed in “Formal structure of the the qualification” in the Summary.

NOTE: this grid can be replaced by any part of the qualification documentation which shows the same information – ie Learning Outcomes to be assessed, assessment criteria and the means of assessment.

Job Role: Excavator-Operator

Qualification Pack: HYC/Q6304

Sector Skill Council: Hydrocarbon Sector Skill Council

Guidelines for Assessment

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC
3. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre (as per assessment criteria below)
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on these criteria

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5. To pass the Qualification Pack, every trainee should score a minimum of 70% aggregate

6. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack

Compulsory NOS				Marks Allocation		
Total Marks: [70]						
Assessment outcomes	Assessment Criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical	
1. {HYC/N6307 Perform excavation work for laying pipeline}	PC1. checks working status of equipment for excavation work	70	70	5	1	4
	PC2. Check location/site of excavation before start of excavation			4	1	3
	PC3. carryout excavation work for pipeline laying with appropriate method			4	1	3
	PC4. ensure trench is excavated as per required depth and bedding for laying pipeline			5	1	4
	PC5. maintain quality work during excavation processes			5	2	3
	PC6. carryout the rigging of pipes, manhole barrels, etc. for laying pipeline			4	1	3
	PC7. carryout trench refilling to restore the land to its original state after completion of required pipeline check by the concerned team			6	2	4
	PC8. perform routine maintenance of equipment to ensure smooth operation			4	1	3
	PC9. identify the risks in handling various hand tools and equipment used for excavation work			4	1	3

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	PC10. Use proper PPEs during excavation operation		4	2	2
	PC11. check movement of vehicles near excavated area and place barricades		4	1	3
	PC12. follow safe work procedures during rigging of materials into the excavated area		4	1	3
	PC13. prevent unauthorized access into the excavated area		5	2	3
	PC14. follow safety procedures to prevent cave-ins & loose rock/soil from rolling into the excavated area		4	1	3
	PC15. Put the required safety boards on display before and during excavation work at site.		4	1	3
	PC16. use proper safety methods while handling electrical items during excavation on electrical cable trenches		4	1	3
			70	20	50

Compulsory NOS				Marks Allocation	
Total Marks: [50]					
Assessment outcomes	Assessment Criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
2.{HYC/N9301 Working effectively in team}	PC1. maintain clear communication with colleagues	50	6	2	4
	PC2. pass on information to colleagues in line with organisational requirements		8	3	5
	PC3. work in a team and support the team members		7	3	4

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Compulsory NOS				Marks Allocation	
Total Marks: [50]					
Assessment outcomes	Assessment Criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
	PC4. work in ways that show respect to colleagues		7	3	4
	PC5. fulfil commitments made to colleagues		8	3	5
	PC6. inform team members timely, if timelines can't be met		7	3	4
	PC7. take the necessary initiatives to resolve the issues while working in team		7	3	4
				20	30

Compulsory NOS				Marks Allocation	
Total Marks: [100]					
Assessment outcomes	Assessment Criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
3.{HYC/N9302 Maintain health, safety and security procedure)	PC1. use protective clothing/equipment for specific tasks and work conditions	75	5	1	4
	PC2. identify documents, location and people responsible for health and safety in the workplace		3	2	1
	PC3. identify possible causes of risk or accident in the workplace		4	1	3
	PC4. carry out safe working practices while dealing with hazards to ensure the safety of self and others		4	2	2
	PC5. lift heavy objects safely using correct procedures		4	1	3

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Compulsory NOS				Marks Allocation	
Total Marks: [100]					
Assessment outcomes	Assessment Criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
	PC6. identify common safety signs, displayed in various areas		4	2	2
	PC7. use the various appropriate fire extinguishers on different types of fires correctly		4	2	2
	PC8. follow rescue techniques applied during fire hazard		4	2	2
	PC9. follow good housekeeping practice in order to prevent fire hazards		4	2	2
	PC10. list issues concerning the safety in work place		4	1	3
	PC11. inform fire safety department about any near-miss incidents in the work place		4	2	2
	PC12. follow the applicable laws, regulations and codes as per safety standard		4	1	3
	PC13. prepare written accident/incident report and share with the concerned officer/department		4	2	2
	PC14. provide appropriate first aid to victims in emergency situation		5	1	4
	PC15. demonstrate basic techniques of bandaging		5	1	4
	PC16. respond promptly and appropriately to an accident		3	0	3
	PC17. perform rescue activity during an accident in real or simulated environments		5	1	4

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Compulsory NOS				Marks Allocation	
Total Marks: [100]					
Assessment outcomes	Assessment Criteria for outcomes	Total Marks	Out Of	Theory	Skills Practical
	PC18. demonstrate correct method to rescue injured people and others during an emergency		5	1	4
			75	25	50

24. Assessment evidences

Title of Component:

Outcomes to be assessed/NOSs to be assessed	Assessment criteria for the outcome
Means of assessment 1 The assessment comprises of: <ul style="list-style-type: none">➤ Theory/Knowledge test➤ Practical/Demonstration Test➤ Assessment evidence in form of assessment event photograph and attendance sheet	
Means of assessment 2 Add boxes as required.	
Pass/Fail the passing percentage will be on aggregate 50%. (Technical NSQF level 2)	

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SECTION 2

25. EVIDENCE OF LEVEL

OPTION A

Title/Name of qualification/component: Enter the title here			Level: Add level number
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relate to the NSQF level descriptors	NSQF Level
Process	The individual at Excavator-Pipeline is required to do the excavation work for laying oil and natural gas pipeline.	The individual is requiring to perform regularly limited range of activities under close supervision	2
Professional knowledge	<p>The individual should have the basic knowledge of equipment used for excavation work for laying oil and gas pipeline</p> <p>The individual must possess the knowledge of location and environment to identify hazard prone areas before starting excavation work</p>	The individual at this job required basic of excavation process and earth back filling as per the procedure	2
Professional skill	The individual must excavate the trench as per required depth and bedding for laying of pipeline and maintain quality work during excavation process and should follow safe working practice	The individual demonstrates the skill required for excavation for laying oil and gas pipeline. The skills used for performing excavaton work in laying pipeline are limited.	3

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Title/Name of qualification/component: Enter the title here number			Level: Add level
NSQF Domain	Outcomes of the Qualification/Component	How the outcomes relate to the NSQF level descriptors	NSQF Level
	He should be able to report the problem and issues related to the excavation work to the supervisor		
Core skill	The individual is expected to have basic communication skills to fill appropriate forms, process charts and activity logs, etc. and also understand application of basic arithmetic principles.	The individual requires to have basic written and oral communication skill. The individual should be able to communicate in local language and be able to communicate the message to superiors. The individual should also require to have basic understanding of numeracy and arithmetic	2
Responsibility	The individual perform excavation work for laying oil and gas pipeline and he/she works under instruction and close supervision	The individual perform the work under close supervision and follows the instruction of supervisor	2

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OPTION B

Title/Name of qualification/component: Enter the title here			Level: Add level number
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
Process			
Professional knowledge			
Professional skill			
Core skill			
Responsibility			

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SECTION 3

EVIDENCE OF NEED

26	What evidence is there that the qualification is needed? What is the estimated uptake of this qualification and what is the basis of this estimate?						
	<p>The Excavator-Pipeline is responsible for excavation work involved in laying oil and gas pipeline and earth backfilling in accordance with safe working practices, plans and approvals.</p>						
	<p>HSSC, in pursuance to the communication from MoP&NG in regard to developing the scheme for the requirement of skill, semiskilled and unskilled manpower in City Gas Distribution (CGD) business and an intra-industry committee comprising the representatives of following organisations were constituted:</p>						
	<ol style="list-style-type: none">1) IGL2) IOCL3) GAIL4) HPCL5) BPCL						
	<p>The committee had identified the required trades for CGD along with number of skilled, semiskilled and unskilled manpower. It was estimated by the committee that approximately 6000 Process Instrument Technician will be required in CGD business in next 20 years and approximately 200 technicians will be required in first year of the operations only in 9th round winning CGD entities</p>						
	<table border="1"><thead><tr><th data-bbox="336 1391 632 1603">Basis</th><th data-bbox="632 1391 1038 1603">In case of SSC</th><th data-bbox="1038 1391 1396 1603">In case of other Awarding Bodies (Institutes under Central Ministries and states departments)</th></tr></thead><tbody><tr><td data-bbox="336 1603 632 2060">Need of the qualification</td><td data-bbox="632 1603 1038 2060">The SSC would undertake market study and would enclose demand forecast for the proposed job role both on short-term and long-term basis to substantiate the requirement of the Qualification proposed. The SSC can produce the data from primary or</td><td data-bbox="1038 1603 1396 2060">The Submitting Body would produce any reputable and reliable research reports, such as labour market information reports; occupational mapping or similar research carried out by Ministry/State/Any other authentic source</td></tr></tbody></table>	Basis	In case of SSC	In case of other Awarding Bodies (Institutes under Central Ministries and states departments)	Need of the qualification	The SSC would undertake market study and would enclose demand forecast for the proposed job role both on short-term and long-term basis to substantiate the requirement of the Qualification proposed. The SSC can produce the data from primary or	The Submitting Body would produce any reputable and reliable research reports, such as labour market information reports; occupational mapping or similar research carried out by Ministry/State/Any other authentic source
Basis	In case of SSC	In case of other Awarding Bodies (Institutes under Central Ministries and states departments)					
Need of the qualification	The SSC would undertake market study and would enclose demand forecast for the proposed job role both on short-term and long-term basis to substantiate the requirement of the Qualification proposed. The SSC can produce the data from primary or	The Submitting Body would produce any reputable and reliable research reports, such as labour market information reports; occupational mapping or similar research carried out by Ministry/State/Any other authentic source					

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		authorized secondary sources as well.	forecasting the demand for the proposed qualification
Industry Relevance		The SSC would undertake validation of the job roles with actual end-user industry where such employment are going to be generated and absorbed instead of generic validation of industry. The SSC would submit the endorsements from users/intended users of the qualification clearly supporting or otherwise the need for trained people against specific job role. <i>(The industry validation format to be used)</i>	The Submitting Body would submit the list of industry participation while preparation of the curriculum/ course content of the qualifications. These could include minutes of the meeting/ reports of these consultations
Usage of the qualification		The SSC would submit details of the employment generated (wherever applicable) and realised by virtue of training in the Qualifications of the sector earlier submitted for NSQF alignment. In case of unorganized sector, case studies or evidences may be given	The submitting body would submit the details of trained and placed data in the proposed qualification (if an existing qualification is being proposed for NSQF alignment) Information about the success of the qualification should be given (eg. uptake figures, examples of use in recruitment and placement rates (if known) should be given. However, many of the bodies that do not have placement tracking mechanism

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			established in place would provide necessary endorsements by the state/ ministry stating that a tracking mechanism would be institutionalized and placement records shall be provided annually or later , depending on length of qualification.
	Estimated uptake	The SSC would submit the estimated uptake of the qualification and What steps were carried out to test the likely uptake of the qualification? The basis of this estimate should include data about the number of jobs or places in courses of learning which will be available to people who are awarded the qualification.	The Submitting Body should submit the estimated uptake by reflecting the number of the takers for this qualification for at least two years from submission of the qualification
27	<p>Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidences</p> <p>HSSC in pursuant to a letter Ref no L-15016/5/2017-GP-I (Pt II) from MoP&NG dated 27.06.2018, constituted an intra-industry committee to develop a scheme for skilled, semiskilled and unskilled manpower in City Gas Distribution (CGD) Industry.</p> <p>The committee had identified the various required trades in CGD business along with number of skilled, semiskilled and unskilled manpower requirement in next 25 years. The Fire Safety Technician (Oil & Gas) is one of the identified trades in CGD business by the industry committee.</p>		

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28	<p>What steps were taken to ensure that the qualification(s) does (do) not duplicate already existing or planned qualifications in the NSQF? Give justification for presenting a duplicate qualification</p> <p>Qualifications for Various related trades were studied. It is found that there is no other qualification of this or related trade is existing.</p>
29	<p>What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated? Specify the review process here</p> <p>The Qualification Pack was circulated among the industry members for their inputs and feedback; however, the Qualification shall be reviewed by the industry members after four years of the approval.</p>

Please attach most relevant and recent documents giving further information about any of the topics above.

Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

SECTION 4

EVIDENCE OF PROGRESSION

30	<p>What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?</p> <p><i>Show the career map here to reflect the clear progression</i></p> <p>NA</p>
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Please attach most relevant and recent documents giving further information about any of the topics above.

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