



GUJARAT GAS



# Initiatives to Prevent Road Accidents -LCV/HCV

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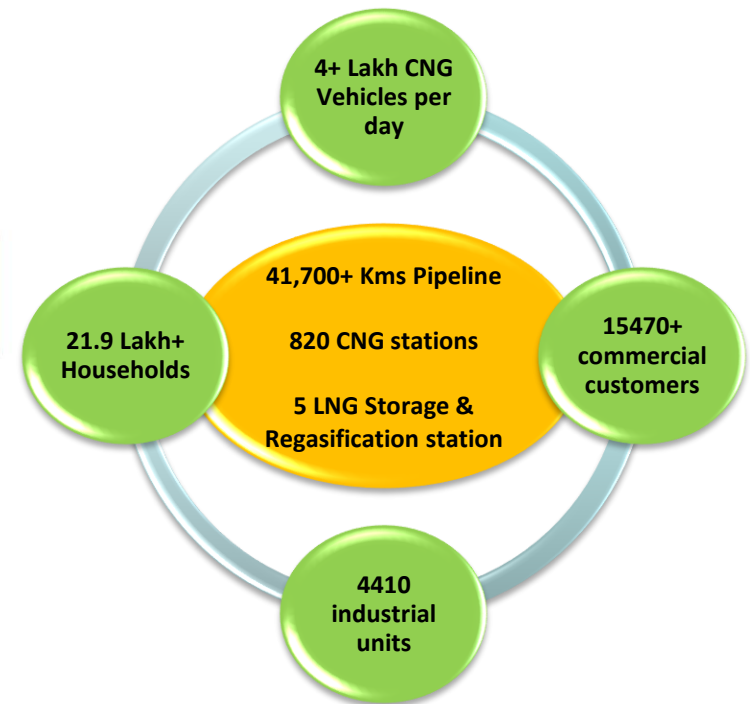
# About GGL

- Government of Gujarat undertaking
- India's largest City Gas Distribution (CGD) Company in terms of sales volume
- Presence in 44 districts in India

## Gujarat Gas – CGD Licenses Across 6 States & 1 UT



Map not to scale, only for reference purpose  
\*Except areas already authorized



# Road accidents in India - 2022

- 460,000 road accidents
- 443,000 injuries
- 168,000 fatalities
- Trucks constitute around thirteen percent of all road accidents and around fifteen percent of all fatalities
- Oil & Gas Industry is responsible for around 140 fatalities (avg. of last 3 years) and 120 injuries (avg. of last 3 years) each year.

Road incidents reported by entities to PNGRB in the past three financial years.

S. No.	Financial Year	Total incidents	Fatalities	Injuries
1.	2020-2021	286	148	96
2.	2021-2022	232	108	91
3.	2022-2023	268	157	174

# MCV Road accidents at GGL – Last 5 years

- 79 road accidents involving CNG MCV
- 26 injuries (Third party + MCV Drivers)
- 3 fatalities
- 20 incidents of MCV toppling
- 0.07 accidents/1 lakh km movement of MCV

# Road accidents – LCV/HCV – Risk to public





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# Uncontrolled causes of road accidents

Road conditions – Slippery, uneven roads, soil collapse, Gap in median, etc  
Weather conditions – Limited visibility during night, rain, fog, etc.



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# Other causes of road accidents

- Over speeding
- Use of mobile phone while driving
- Driving under influence (Alcohol, drugs, medication, etc.)
- Driving on the wrong side
- Poor vehicle condition
- Jumping red light
- Overtaking in a wrong manner
- Non-adherence to lane driving
- Driving under fatigue

# MCV movement at GGL

- CNG MCV and LNG Tanker movement ~90,000+ km/day
- 800+ MCV
- 1500+ hired drivers
- ~15 Transport service providers



# Key elements to ensure Road safety



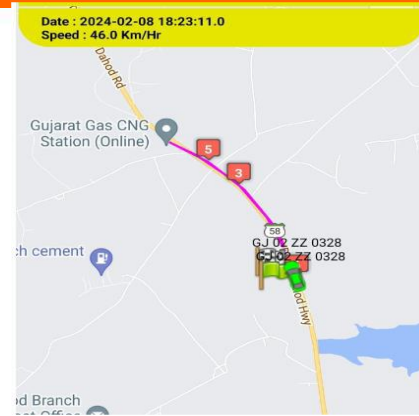


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# Initiatives to prevent road accidents – LCV/HCV

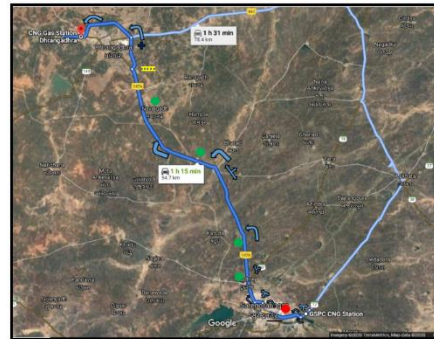


Lifesaver rules for 'Driving', 'CNG handling' and 'LNG handling'



Vehicle Tracking System  
Restriction on maximum speed

CNG Mobile Cascade Vehicle (LCV/MCV/HCV) Route Risk Assessment for Identification of Hotspot & Critical Information		Doc. No. : CNG-F-47
		Rev. No. : 01
		Effective Date : 16.11.2021
Name of Zone (GA)		
Mother CNG Station		
Daughter/Daughter Booster CNG Station		
MCV Route (Name of Road/Highway) & Roundtrip distance in Kms		
Name of GA HSE Representative		
Name of GA CNG Lead		
GGI Emergency Contact person & Number		
CNG Transport service provider Contact person & Number		
<b>A. Criteria for identifying Hot-spots</b> <ul style="list-style-type: none"> <li>Accident prone areas</li> <li>Sharp turns / Blind turns / U turns</li> <li>Narrow road / Single lane road</li> <li>Roads without divider</li> <li>Approach (small / village) roads connecting to the MCV route</li> <li>Cross roads</li> <li>Grid in median / divider</li> <li>Densely populated areas</li> <li>Heavy traffic zones</li> <li>Roads under construction / with diversion</li> <li>Projecting tree branches</li> <li>Road with steep shoulders</li> <li>Frequent animal movement across the road</li> <li>Frequent movement of vulnerable road users during night hours such as pedestrians, cyclists, bikers, tractors, bullock carts etc.</li> <li>Road section without any street lights (Unitil road section)</li> <li>Isolated areas (during security risk)</li> <li>Others</li> </ul>		
<b>B. Critical information to be captured along the route</b> <ul style="list-style-type: none"> <li>All Police stations / Thana / Post along the route</li> <li>Fire stations along the route</li> <li>Hospitals working during night hours along the route</li> <li>All Petrol / Diesel retail outlets along the route</li> </ul>		



- School
- Temple
- Village
- Petrol Pump
- + Circle Four Way Crossing
- + Railway Flyover
- + Dangerous Turn
- + Taping
- + Nala / River Crossing
- + Rail Crossing

Additional safety checks to be ensured for Night Driving (i.e. for MCV Movement from 10:00 pm to 01:00 am and 04:00 am to 06:00 am. MCV Movement from 01:00 am to 04:00 am shall not be allowed).		
1	Check that all exterior lights are clean and work properly - front and rear, brake lights, parking lights, turn signals and high beams	
2	Emergency flashlight is available and working properly	
3	Flameproof torch is available and is working properly	
4	Wind shield & window glass are clean of dirt, bugs, and damages and wipers are working properly with sufficient availability of cleaning water in wiper bottle	
5	Maximum speed limit is set to 40 kmph for the vehicle used for night driving	
6	Driver is not under medication/ exhausted / drowsy / sleepy / drunk and is attentive enough	
7	Breath alcohol test is carried out for the driver	
8	Driver is not working overtime	
9	Driver is trained for safe night driving	
10	Driver's vision is clear and has no colour /night blindness as per medical check-up report	
11	Night driving is avoided in adverse weather conditions like fog, heavy rain, hailstorm, etc.	
12	Availability of supervisor of respective MCV contractor during night shift to handle emergency if any	
13	Emergency contact list (Fire stations, Police stations, Hospital working 24 * 7 along the travel route, GGI Emergency Contact person & Number, CNG Transport service provider Contact person & Number, GGI Duty Manager number) is available with driver	
14	Co-driver is available with the driver during night journey of more than 100 kms single side	

CNG / LNG Tanker route risk assessment and identification of hotspots (vulnerable locations)

Restricted night driving  
Additional check-points for night driving

# Initiatives to prevent road accidents – LCV/HCV



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Defensive driving training ~6500+ manhours/year  
 Refresher training – Every 3 years  
 Route risk assessment & Incident lesson learnt sharing

Gujarat Gas		Check List for Manpower CNG mobile Cascade vehicles (LCV/HCV)	Doc. No.: CNG-F-148 Rev. No.: 01 Effective Date: 02.12.2020
MCV Registration Number : _____			
Name of GA : _____			
Name of CNG Mother Station : _____			
Name of the contractor : _____			
Date & Time : _____			
No.	Description	Current Status	Remarks
1	Availability of driver		
2	Availability of Manager/ Supervisor		
3	Availability of card with all manpower with details including blood group & emergency contact number		
4	Copy of valid driving license		
5	Certificate for hazardous goods transportation training		
6	Driver license as to read and write in card language used in respective state		
7	Proof of medical certificate as and when required by the Doctor		
8	Defensive driving & first aid training of their workmen once every three years		
9	shall provide the P.T. S.L.C. and annual bonus to their staff as per the Government norms		
10	Observed Non-compliance: non spending, route deviation, use of mobile while driving (through VTS / CCTV / Physical check)		
11	Completion of corrective actions as communicated by GGS		
Any other remarks: _____			
Checked by Name & Sign: _____			

Gujarat Gas		Sample Certificate for Medical Fitness	Doc. No.: CNG-F-148 Rev. No.: 01 Effective Date: 02.12.2020
Name of Examination: _____			
Name: _____			
Gender: M / F / O			
Mother's Name: _____			
Date of Birth: _____			
Family History (Hypertension/Diabetes/Cholesterol/M...)			
Personal History (a) Alcohol (b) Medication (c) Smoking (d) Other (e) Hypertension			
Other Diseases (Hypertension)			
Height: _____			
Weight: _____			
C.P. No. of No. _____			
Examination Date: _____			



Manpower checklist for CNG transportation

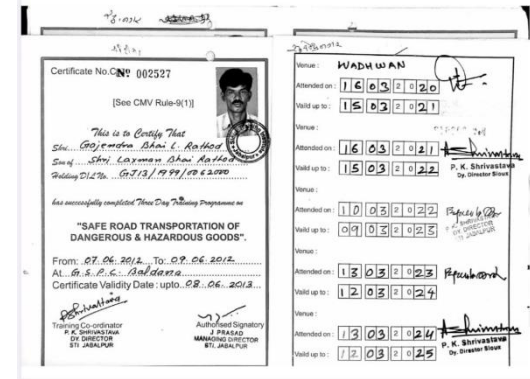
Driver Medical Fitness Eye checkup



Random testing using Breath Alcohol Analyzer



Recognition of the driver



Hazardous Goods Transportation training

# Initiatives to prevent road accidents – LCV/HCV

GUJARAT GAS		Check List for Regular Inspection of CNG mobile Cascade vehicles (LCV/MCV/HCV)	Doc. No.: CNG-F-16A Rev. No. 02 Effective Date: 16.11.2021
MCV Registration Number:			
Name of GA:			
Name of CNG Mother Station:			
Name of the contractor:			
Date & Time:			
Sr. No.	Description	Current Status	Remarks
1	Availability of PPE for driver		
2	Availability of Firez Aid box		
3	Condition of Seat Belt		
4	Mobile set to workman or drivers		
5	Wheel Jack with Jack Rod		
6	Tool Kit		
7	Availability of VTS Device		
8	Operational Condition of VTS Device		
9	Filment condition of fire extinguisher		
10	Spare wheel (availability)		
11	Painting of the vehicles		
12	Display of emergency numbers		
13	High Level Brake Lights as per OEM supplied		
14	High Intensity Discharge Headlamps as per OEM supplied		
15	Reflective Strips and Reflective Markers on the Vehicle as per ITD norms		
16	Side Indicators on all the Corners of the Vehicle		
17	Reversing Alarm (Reverse Horn)		
18	Power Steering as per OEM supplies		
19	Dash-board with Odometer, Fuel Indicator, Temperature Meter & Road Speed Indicator as per OEM supplies		
20	Both the Side Rear view Mirror as per OEM supplies		
21	Reverse camera system with parking sensors		



Bimonthly inspection of each MCV  
(4800+ inspections in a year)



Reverse camera system with parking sensors & LED/LCD screen in driver cabin

# Initiatives to prevent road accidents – LCV/HCV

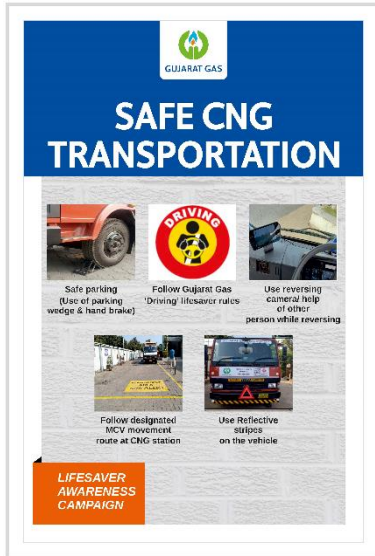


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Reflective warning triangles & cones

Reflective jacket for driver



Awareness campaigns

Duty Manager number on all MCV for emergency contact

# Initiatives to prevent road accidents – LCV/HCV



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## Annexure – 4 CPAR – CNG Transportation Contracts

Contractor Performance Assessment Report (CPAR) - CNG Transportation		Doc. No. : HSE-F-64 Rev. No. : 05 Eff Date : 05.11.2024	
G&A / Function:	Month of Evaluation:		
Location:	Department:		
Type of Work/Service:	Work order number:		
Name of the Contractor / Firm:	Contractor Name:		
Contractor Work in-charge:	GGL Work in-charge:		
	Actual Marks	Maximum Marks	CATEGORY
<b>A. Business Performance (Weightage 40%)</b>			
1. Management and maintaining availability of adequate numbers of MCV for operation as per GGL requirement	30	30	Availability of each vehicle/driver <50% hrs
2. Management and maintaining availability of adequate number of trained MCV drivers for all shifts with valid license as per GGL requirement	30	30	>50% hrs
<b>B. Contract Management (Weightage 15%)</b>			
1. Timely deployment of additional resources or replacement of drivers/supervisors as required	3	3	
2. Timely & proper servicing of MCV and availability of Tools/Tackles, spare wheel, lifting jack, towing rope, torque wrench, flameproof torch etc.	3	3	Non-compliance/ Un-adherence
3. Timely response and resolution of Complaints	3	3	Partial Compliance
4. Notify GGL promptly in case of any deviation/incident or any information as required by GGL	3	3	Full compliance/ Adherence
5. Maintain complete records and Submission of reports, bills, returns in time	3	3	Not applicable
<b>C. Quality Controls (Weightage 15%)</b>			
1. Condition of MCVs (including functioning of VTS, reverse camera, reverse horn, wiper, lights, brakes, tyre, etc.)	5	5	Non-compliance/ Un-adherence
2. Quality of driving & professional conduct, behaviour of drivers	5	5	Partial Compliance
3. Availability of competent supervisors	5	5	Full compliance/ Adherence
<b>D. HSE Compliance (Weightage 20%)</b>			
1. Adherence to GGL Liferesuer rules on Driving	2	2	
2. Reporting of Hazard / near miss into 2 nos. by staff & Liferesuer monitoring (NPI) min 2 nos. by supervisor/manager	2	2	
3. Regular Health check up of drivers	2	2	
4. Completion of required safety trainings organized by GGL and/or provided by authorised training agency before deployment of driver / supervisor at GGL	2	2	Non-compliance/ Un-adherence
5. Availability of basic safety requirements like first aid kit with valid contents, TREM card, fire-extinguisher, caution board, warning triangle/reflective cone, PDA etc.	2	2	Partial Compliance
6. Compliance to safe CNG filling operation like MCV earthing, safety interlocks to avoid CNG filling hose pull out etc.	2	2	Full compliance/ Adherence
7. Compliance to safe parking requirements of MCV like use of wedge lock, hand brake, gear mode, etc.	2	2	Not applicable
8. Compliance to safe movement including servicing of the MCV within CNG station	2	2	
9. Briefing to drivers by supervisor/manager about incident/losses & risk along the MCV route	2	2	
10. Monitoring of driving behaviour by supervisor through VTS & other means	2	2	
<b>E. Other Key Performance (Weightage 10%)</b>			
1. Compliance with Statutory & Legal requirements related to MCV and drivers	5	5	Non-compliance/ Un-adherence
2. Closure of recommendation from previous CPAR to the satisfaction of GGL	5	5	Full compliance/ Adherence
<b>NOTE : N/A (not applicable) should be used if the ratings are not going to be applied to a particular area for evaluation</b>			
Total Points Gained (A+B+C+D+E)	100		
Maximum Points - All Applicable line items of (A+B+C+D+E) = 100 + 0 + 0 + 0 + 0 = 100	100		
CPAR Score = Total Points Gained / Maximum Points x 100	100%		
Performance Category (as per Table-1 of HSE-F-08)	Exceptional	Satisfactory	Below Satisfactory
Recommendations for Improvements (to be reviewed next month):			
1.			
2.			
3.			
Evaluator (GGL)	Contractor Representative		

### 3.9.3. Penalty related to injury cases:-

SN	Parameter	Penalty (INR)
1	Fatal incident	For each fatal case either 1,00,000/- <b>OR</b> 10 % of total contract value, whichever is lower
2	Lost time injury	For each injury case either 20,000/- <b>OR</b> 5 % of total contract value, whichever is lower
3	Medical Treatment case / Restricted workday case (Excluding animal/insect bite cases)	For each injury case either 10,000/- <b>OR</b> 2 % of total contract value, whichever is lower

#### Note:

- Penalty shall be imposed over and above the payment & compensation that would be made by the Bidder to the injured person or family of deceased vide the statutory provisions.

3.9.4. A penalty of Rs. 10,000 per instance in case of pull out of the CNG filling hose from CNG filling post due to negligence of the driver, over and above the actual damage cost.

3.9.5. A penalty for Rs. 50,000/- per instance in case of commercial vehicle overturn (with/without collision or accident) over and above the compensation by bidder to GGL towards loss of direct & indirect losses.

3.9.6. Un-trained Driver/co-driver (all trainings as per trainings listed in this scope of Work) – Rs 1000 per driver

3.9.7. Health Checkup not done before deployment/on annual basis – Rs 2000 per person

3.9.8. Other than above mentioned fatal injury & accidents, other nature of accidents and loss of property shall be dealt with the provision mentioned in tender document elsewhere.

3.9.9. Rs.100/- per vehicle per occurrence against over speeding of vehicle (Vehicle speed shall not be more than 50 Km / hr.). 10% Variation/VTS error in speed allowed during imposing penalty.

3.9.10. Rs.100/- per instant per device per delayed day against non-working of Vehicle tracking system beyond resolution time mentioned in VTS technical scope

3.9.11. Rs.100/- per vehicle per occurrence, in case of delay beyond 30 minutes in predefined trip time or not following the predefined route.

CPAR (Contractor Performance Assessment Report)  
Meetings with MCV transport providers

Penalties in contracts as a deterrent



**Thank You**

# Post incident management

- Vehicle fitness assurance
- Cascade testing
- Insurance claim
- Medical aid to injured
- Counselling and refresher training for MCV driver
- Root causes and incident lesson learnt sharing with driver



# Major causes identified at GGL

Reason	Numbers
Hit by another vehicle on back side	11
Vehicle overtaking wrongly	11
Vehicle coming on wrong side	10
Others	9
During crossing /U-turn	8
Poor road condition	7
Overspeeding	6
Animal on road	5
Low visibility (Night/Fog)	5
Intoxication/Fatigue	4
Sudden braking	3
Vehicle fitness issue	1

