



Quality HVAC Program | Quality Maintenance Call Tier II Checklist

Company Name & CSLB Number:

Household Last Name & Street Number:

Customer email:

Service Date:

DIRECTIONS: This comprehensive checklist is to be completed onsite and uploaded to Iris. Certain key findings -- indicated by thick boxes below -- must be reviewed with and signed off by the customer. This customer review can be done using this checklist or via the Quality Service Report you will get by email. The key findings must also be entered in the online form at https://frontierenergy.formstack.com/forms/qmc_ii

INSPECTIONS

| | | | | |
|--|----------------|----|---|--|
| Attic Insulation | Results | 4 | <input type="radio"/> No Further Attention Needed on Attic Insulation | <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">All sections must be completed. If they are Not Applicable, write "NA" and add an explanation in the comments box.</div> <div style="border: 1px solid black; padding: 5px;">Remember, boxed values must be entered online</div> |
| | | 5 | <input type="checkbox"/> NA – no attic / not accessible | |
| | | 6 | <input type="checkbox"/> Adequate and in good condition | |
| | | 7 | <input type="checkbox"/> Needs minor adjustments | |
| | | 8 | <input type="radio"/> Further Attention May Be Needed on Attic Insulation | |
| | | 9 | <input type="checkbox"/> Needs more insulation | |
| | | 10 | <input type="checkbox"/> Needs replacement | |
| Duct Insulation | Results | 12 | <input type="radio"/> No Further Attention Needed on Duct Insulation | |
| | | 13 | <input type="checkbox"/> NA – ductless system | |
| | | 14 | <input type="checkbox"/> NA – ducts not accessible | |
| | | 15 | <input type="checkbox"/> Ducts in conditioned space | |
| | | 16 | <input type="checkbox"/> Adequate and in good condition | |
| | | 17 | <input type="checkbox"/> Vapor barrier has only minor tears or gaps | |
| | | 18 | <input type="radio"/> Further Attention May Be Needed on Duct Insulation | |
| Air Filter | Results | 22 | <input type="radio"/> No Further Attention Needed on Air Filter | |
| | | 23 | <input type="checkbox"/> NA – no filter needed | |
| | | 24 | <input type="checkbox"/> Filters are adequate | |
| | | 25 | <input type="checkbox"/> Minor fouling | |
| | | 26 | <input type="radio"/> Further Attention May Be Needed on Air Filter | |
| | | 27 | <input type="checkbox"/> Extremely fouled | |
| | | 28 | <input type="checkbox"/> No filter | |
| Ventilation Mechanism | Results | 31 | <input type="radio"/> No Further Attention Needed on Ventilation Mechanism | |
| | | 32 | <input type="checkbox"/> All bathrooms have fans and kitchen hood works and exhausts to outside | |
| | | 33 | <input type="checkbox"/> Has ERV or HRV | |
| | | 34 | <input type="checkbox"/> HVAC has outside air duct | |
| | | 35 | <input type="radio"/> Further Attention May Be Needed on Vent. Mechanism | |
| | | 36 | <input type="checkbox"/> Some bathrooms have no operating fans or don't exhaust to outside | |
| | | 37 | <input type="checkbox"/> Kitchen hood not functioning/doesn't exhaust outside | |
| INSPECTION Comments, Recommendations, and/or NA Explanation | | 72 | | <div style="border: 1px solid black; padding: 5px; display: inline-block;">Enter anything the customer should know and explain anything that is Not Applicable (NA)</div> |

TESTS

| | | | | | | |
|---|-------------------------|--|---|----|---|--|
| Static Pressure | Results | 81 | Supply Static Pressure | | IWC | = Supply SP - return SP; ≤ 0.7 required if ductwork is new |
| | | 82 | Return Static Pressure | | IWC | |
| | | 83 | Total External Static Pressure | | IWC | |
| Temperature Split | System Mode During Test | 86 | <input type="radio"/> Heating Mode | | | For heating = supply - return, ideally 25-65 For cooling = return - supply, ideally 15-25 |
| | | 87 | <input type="radio"/> Cooling Mode | | | |
| | Results | 89 | Supply Air Temperature | | °F | |
| | | 90 | Return Air Temperature | | °F | |
| | | 91 | Temperature Split | | °F | |
| Charge Test | Rationale for Test | 109 | <input type="checkbox"/> Confirmed that Charge Test was Warranted | | | |
| | | 110 | <input type="checkbox"/> Bad temperature split | | | |
| | | 111 | <input type="checkbox"/> Comfort complaints across rooms | | | |
| | | 112 | <input type="checkbox"/> Observed presence of oil suggesting leaks | | | |
| | | 113 | <input type="checkbox"/> Other (please explain in comments box) | | | |
| | | 115 | <input type="checkbox"/> Did Troubleshooting Before Charge Test | | | |
| | | 116 | <input type="checkbox"/> Restricted filter flow | | | |
| | | 117 | <input type="checkbox"/> Collapsed/disconnected ductwork | | | |
| | | 118 | <input type="checkbox"/> High TESP | | | |
| | | 119 | <input type="checkbox"/> High DP across coil | | | |
| | 120 | <input type="checkbox"/> Ducts are too small | | | | |
| | Test Procedure | 122 | Was Lowest Outdoor Air Temperature <55°F? | | <input type="radio"/> Yes <input type="radio"/> No | |
| | | 125 | If YES, how was test done? | | | |
| | | 126 | <input type="checkbox"/> In cooling mode with condenser outlet restrictor | | | |
| | | 127 | <input type="checkbox"/> Evacuated and used weigh in method | | | |
| | | 128 | <input type="checkbox"/> Made plans to return when temperatures are higher | | | |
| | | 129 | <input type="checkbox"/> Other (please explain) | | | |
| | | 130 | Metering Device and Test Completed: <input type="radio"/> TXV/EXV: did SC test <input type="radio"/> Fixed Orifice: did SH test | | | |
| | Results | 132 | Target SC or SH | | °F | = refrigerant line temp - saturation temp = target - measured SC or SH; ideally 0 |
| | | 133 | Measured SC or SH | | °F | |
| 134 | | Difference from Target | | °F | | |
| Diagnosis | 136 | <input type="checkbox"/> Charge OK | | | | |
| | 137 | <input type="checkbox"/> Charge Too High | | | | |
| | 138 | <input type="checkbox"/> Charge Too Low | | | | |
| | 139 | <input type="checkbox"/> Another Problem | | | | |
| Resulting Action Taken | 141 | <input type="checkbox"/> Discussed with Customer | | | If added or recovered charge, must also address in the Refrigerant Management section (field #301), including taking a photo. | |
| | 142 | <input type="checkbox"/> Recovered Charge | | | | |
| | 143 | <input type="checkbox"/> Added Charge | | | | |
| | 144 | <input type="checkbox"/> Provided Bid | | | | |
| | 145 | <input type="checkbox"/> No Adjustment Made | | | | |
| TEST Comments, Recommendations, and/or NA Explanation | 147 | | | | | |

ADJUSTMENTS

| | | | | | |
|----------------------------|-----------------------------|---|--|--|--|
| Thermostat and Programming | Talked to Occupant About... | 241 | <input type="checkbox"/> Thoughts on Current Thermostat and Settings | | Including Demand Response, Setbacks, Precooling, Thermostat Eco Modes. |
| | | 242 | <input type="checkbox"/> Current Strategies for Controlling Temperatures | | |
| | | 243 | <input type="checkbox"/> Interest in Advanced Strategies | | |
| | | 244 | <input type="checkbox"/> Recommended Thermostat Schedule | | |
| | | 245 | <input type="checkbox"/> Other Recommendations, ex. Thermostat Upgrade | | |
| | Adjusted and Confirmed | 247 | <input type="checkbox"/> Checked Sensor Calibration and Adjusted as Needed | | |
| 248 | | <input type="checkbox"/> Reviewed Programming | | | |

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|---|--|--|--|--|
| Thermostat and Programming (Cont.) | Scheduled Program | 250 | <input type="checkbox"/> NA – Not Needed, Already Efficiently Programmed | |
| | | 251 | <input type="checkbox"/> Offered but Customer Declined | |
| | | 252 | <input type="checkbox"/> Thermostat Schedule Programmed | |
| | Programming & Overrides | 254 | <input type="checkbox"/> Offered Instruction but Customer Declined | |
| | | 255 | <input type="checkbox"/> Programming and Override Instruction Provided | |
| | Setup App or WiFi | 259 | <input type="checkbox"/> Offered Assistance but Customer Declined | |
| 260 | | <input type="checkbox"/> Assisted Customer in Installing or Connecting App | | |
| Uploads | 262 | <input type="checkbox"/> PDF or Photo of Recommended or Final Programming | | |
| Heat Pump | Settings | 265 | Supplementary Heating OAT Lockout Setpoint | °F Ideally ≤ 35 |
| | | 266 | Defrost Delay Timer Setting | Minutes Ideally ≥ 90 |
| Evacuation and Charging | Refrigerant Management | 298 | Refrigerant Type | |
| | | 299 | Cannister Weight Before Adjustment | lb:oz |
| | | 300 | Cannister Weight After Adjustment | lb:oz |
| | | 301 | Amount of Refrigerant Added or Recovered | ±lb:oz |
| | | 302 | <input type="checkbox"/> Upload Photo of Scale After Charging, or Final SC/SH | |
| | | 303 | Name of Technician | |
| | | 304 | Date | |
| | | 305 | Serial Number of Equipment that was Adjusted | |
| 306 | Serial Number of Cannister | | | |
| Condenser Coils | Cleaning Criteria | 310 | <input type="checkbox"/> Condenser Coil Cleaning Met all Following Criteria: | |
| | | 311 | <input type="checkbox"/> High pressure cleaning system was not used | |
| | | 312 | <input type="checkbox"/> Caustic or fuming coil cleaning chemicals not used | |
| | | 313 | <input type="checkbox"/> Flushed with water | |
| ADJUSTMENT Comments, Recommendations, and/or NA Explanation | 314 | | | |
| SERVICE COMPLETION | | | | |
| Contract | Maintenance Contract | 323 | <input type="checkbox"/> Enrolled Customer in Maintenance Contract | |
| | | 324 | <input type="checkbox"/> Customer Declined Offer of Maintenance Contract | |
| System Manual | System Manual Contents Added | 327 | <input type="checkbox"/> OEM Installation/Service Manuals or URLs | } Mark all that apply |
| | | 328 | <input type="checkbox"/> Drawing or Plans | |
| | | 329 | <input type="checkbox"/> Installing and Maintenance Contactor Contact Info | |
| | | 330 | <input type="checkbox"/> Recommended / Final Thermostat Programming | |
| | | 331 | <input type="checkbox"/> Refrigerant Charge Data, if Applicable | |
| | | 332 | <input type="checkbox"/> HERS Compliance and Verification Paperwork | |
| | | 333 | <input type="checkbox"/> Commissioning and/or Air Balancing Information | |
| | | 334 | <input type="checkbox"/> Any New Information | |
| | 335 | <input type="checkbox"/> Maintenance Plan | | |
| | 336 | <input type="checkbox"/> Quality Service Report from Current Service | | |
| Location of Manual | 338 | <input type="checkbox"/> Mounted on Indoor Unit | | |
| | 339 | <input type="checkbox"/> Provided in Binder | | |
| Uploads | 341 | <input type="checkbox"/> Photo of System Manual | | |
| Other Programs | Referral to Other Programs | 344 | Review the following programs with the customer: | |
| | | 344a | <input type="checkbox"/> TECH Clean California: \$1,000 incentives for new single family heat pump HVAC systems (up to two systems per home). Requirements: 1) must be a TECH-enrolled contractor, 2) project must be a non-heat pump to heat pump installation, 3) no new construction, retrofits only, 4) equipment must be AHRI matched systems, and 5) equipment must meet Title 24 code minimum standards. See https://techcleanca.com/ . | |
| 344b | <input type="checkbox"/> GoGreen Financing: GoGreen Home provides California residents with financing for energy efficiency upgrades with zero fees or closing costs and some of the best rates available. Eligibility requires that the property receive electric or natural gas service from PG&E, SDG&E, SCE, or SoCalGas. See https://gogreenfinancing.com/ . | | | |

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|--|--|--|---|---|--|--|--|---|--|--|--|---|---|---|--|--|---|
| Other Programs (Cont.) | Referral to Other Programs (Cont.) | 344c | <input type="checkbox"/> Self-Generation Incentive Program: SGIP provides incentives for the installation of qualifying on-site power generation and storage technologies. The current residential incentive is \$0.15 per Wh-AC of the system. Advanced approval and funding reservation is required. The program is implemented by your IOU (PG&E, SDG&E, SCE, or SoCalGas). See https://www.selfgenca.com/ , or research your IOU's website. | | | | | | | | | | | | | | |
| | 344d | Identify and Discuss One Additional Program that Might be of Interest to Customer: <table style="width: 100%; border: none;"> <tr> <td><input type="checkbox"/> ALL-1 Golden State Rebates</td> <td><input type="checkbox"/> PGE-5 BayREN Air Conditioning Rebate</td> </tr> <tr> <td><input type="checkbox"/> ALL-2 Energy Savings Assistance Program</td> <td><input type="checkbox"/> SDGE-1 Residential Energy</td> </tr> <tr> <td><input type="checkbox"/> LADWP-1 Home Energy Improvement Program</td> <td><input type="checkbox"/> SJV-1 San Joaquin Valley Pilot Program</td> </tr> <tr> <td><input type="checkbox"/> LADWP-2 AC Optimization Program</td> <td><input type="checkbox"/> SMUD-1 Sustainable Home Improvement Loans</td> </tr> <tr> <td><input type="checkbox"/> PGE-1 BayREN Air Sealing Rebate</td> <td><input type="checkbox"/> SMUD-2 Appliance Rebates</td> </tr> <tr> <td><input type="checkbox"/> PGE-2 BayREN Duct Sealing Rebate</td> <td><input type="checkbox"/> SMUD-3 Go Electric Rebates</td> </tr> <tr> <td><input type="checkbox"/> PGE-3 BayREN Heat Pump Rebate</td> <td><input type="checkbox"/> SMUD-4 Heating & Cooling Rebate</td> </tr> <tr> <td><input type="checkbox"/> PGE-4 BayREN Insulation Rebate</td> <td><input type="checkbox"/> SMUD-5 Seal & Insulate Rebate</td> </tr> </table> | <input type="checkbox"/> ALL-1 Golden State Rebates | <input type="checkbox"/> PGE-5 BayREN Air Conditioning Rebate | <input type="checkbox"/> ALL-2 Energy Savings Assistance Program | <input type="checkbox"/> SDGE-1 Residential Energy | <input type="checkbox"/> LADWP-1 Home Energy Improvement Program | <input type="checkbox"/> SJV-1 San Joaquin Valley Pilot Program | <input type="checkbox"/> LADWP-2 AC Optimization Program | <input type="checkbox"/> SMUD-1 Sustainable Home Improvement Loans | <input type="checkbox"/> PGE-1 BayREN Air Sealing Rebate | <input type="checkbox"/> SMUD-2 Appliance Rebates | <input type="checkbox"/> PGE-2 BayREN Duct Sealing Rebate | <input type="checkbox"/> SMUD-3 Go Electric Rebates | <input type="checkbox"/> PGE-3 BayREN Heat Pump Rebate | <input type="checkbox"/> SMUD-4 Heating & Cooling Rebate | <input type="checkbox"/> PGE-4 BayREN Insulation Rebate |
| <input type="checkbox"/> ALL-1 Golden State Rebates | <input type="checkbox"/> PGE-5 BayREN Air Conditioning Rebate | | | | | | | | | | | | | | | | |
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| <input type="checkbox"/> LADWP-2 AC Optimization Program | <input type="checkbox"/> SMUD-1 Sustainable Home Improvement Loans | | | | | | | | | | | | | | | | |
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| <input type="checkbox"/> PGE-2 BayREN Duct Sealing Rebate | <input type="checkbox"/> SMUD-3 Go Electric Rebates | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> PGE-3 BayREN Heat Pump Rebate | <input type="checkbox"/> SMUD-4 Heating & Cooling Rebate | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> PGE-4 BayREN Insulation Rebate | <input type="checkbox"/> SMUD-5 Seal & Insulate Rebate | | | | | | | | | | | | | | | | |
| COMPLETION Comments, Recommendations, and/or NA Explanation | | 346 | | | | | | | | | | | | | | | |

SIGNATURES

- Electronic signatures will be uploaded later, after review of the emailed Quality Service Report, at: https://frontierenergy.formstack.com/forms/qhvac_claim_signature_attachment
- Signatures have been obtained below after review of boxed values in this checklist

Customer Name

Technician Name

Customer Signature

Technician Signature

I hereby certify that I reviewed the above key findings with the technician. I understand that this does not signify that I am selecting this contractor or accepting this bid.

I hereby certify that I reviewed the above key findings with the home decision maker.

The Quality Residential HVAC Services Program is funded by California utility customers under the auspices of the California Public Utilities Commission and implemented by Frontier Energy under a contract awarded by San Diego Gas & Electric Company (SDG&E®). Customers who choose to participate in this program are not obligated to purchase any additional services offered by the contractor. Actual savings may vary. The trademarks used herein are the property of their respective owners.