

Improvement of system of providing with gas motor fuel

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Abstract

© 2019, Institute of Advanced Scientific Research, Inc.. All rights reserved. The article presents an analysis of regional development programs for the gas engine fuel and the reasons for their low level of implementation. It also includes the measures, which allow increasing the availability of the gas filling complex for the key consumers of compressed natural gas-the bus fleet. Existing regional programs aimed at expanding the use of natural gas as motor fuel have the disadvantage associated with large financial investments in the implementation of all planned activities. The imperfection of existing development programs leads to significant financial costs, while the level of loading of automobile gas filling compressor stations (AGFCS) increases not significantly. The analysis made it possible to identify the problems faced by the program participants. The article authors offer, as an intermediate measure preceding the construction of an additional gas filling station, to increase the loading of an existing station using the principle of "parent-subsidiary" filling station, that is, to carry out refueling of remote consumers due to the use of mobile gas dispensers and stationary refueling modules. Placement and productivity of "subsidiary" filling stations is determined on the basis of the territorial location of the bus fleet and the compatibility analysis of a group of consumers and the potential filling station that serves them. The practical significance of the article lies in the presented scientifically grounded measures that allow increasing the loading of the existing gas filling complex and increasing the availability of filling stations for the consumers.

Keywords

Filling stations, Gas motor fuel, Natural gas, Regular transport, Vehicle

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