Dual Voltage Source Inverter

What is a dual-source inverter?
This paper is an attempt to provide a dual-source inverter, an intelligent inverter topology that links two isolated DC sources to a single three-phase output through single-stage conversion. The converter is designed to be utilized in hybrid photovoltaic fuel cell systems, among other renewable energy applications.

What is a dual-input dual-output inverter?
Reference 14 describes a dual-input dual-output inverter with nine switches, allowing each source to supply a separate load. In the topology presented in Ref. 15, the input sources cannot have random voltage or current levels. Two dual-input single-output three-phase inverters are discussed in Refs. 1, 2.

What is a dual-input single-output three-phase inverter?
Two dual-input single-output three-phase inverters are discussed in Refs. 1, 2. In the topology developed by Ref. 2, replacing the two inductors of the classic impedance source inverter with two transformers forms a new multi-port inverter. In this inverter, the DC-link voltage is a three-level signal with a specific switching frequency.

What is the voltage gain of the proposed inverter?
Also, the voltage gain of the proposed inverter is almost equal to that of the topology of Ref. 1 in high-power applications. The voltage gain comparison between the topologies shown in Refs. 1, 14, 17 and the suggested inverter.

With increased proliferation of renewable energy sources (RESs), maximizing energy extraction while sustaining power quality of the grid is a major challenge in microgrids ...

Abstract: This paper presents a dual voltage source inverter (DVSI) scheme to enhance the power quality and reliability of the micro grid system. The proposed scheme is ...

This article proposes a dual two-level voltage-source inverter (DTL VSI) and its control to effectively integrate two dc sources into the multi-infeed ac/dc (MIACDC) power ...

The proposed inverter has intrinsic capacitor self-balancing features since the capacitors are connected across the DC voltage source at different times throughout a basic cycle to charge the capacitors at a level ...

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An innovative multilevel inverter (MLI) relying on switched capacitor (SC) architecture is suggested for single-phase inverters with 13-levels. This suggested SCMLI is ...

The proposed dual-source inverter employs a single DC-AC converter, as opposed to

conventional dual-source hybrid inverters which make use of several input DC-DC modules to ...

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