

**DESIGN OF BOOST INVERTER UNDER GRID CONNECTION OF  
SINGLE CELL STRATEGY****Ambika Bandaru<sup>1</sup>, Kishan Ch Rebbavarapu<sup>2</sup>**<sup>1</sup>M.Tech Student, Dept of EEE, Nimra Institute of Engineering & Technology, Ongole, A.P, India<sup>2</sup>Assistant Professor, Dept of EEE, Nimra Institute of Engineering & Technology, Ongole, A.P, India**ABSTRACT:**

Here a new advancement in the topology takes place in the system under which there is a well effective design oriented strategy which includes the scenario of the implementation of the boost inverter for the grid connection using the single cell based strategy is represented as one of the building block and followed by the interconnected fuel cell by the effective reduced compactness and the cost based strategy respectively. Here in the present implementation based strategy under which it includes the design of the well effective system where the storage of the energy system based on the battery and a converter of the bi directional strategy of the dc-dc is a major concern under the effective FC based dynamic support plays a crucial role in its applicability point of perspective. Here the supply of the ripple based on the current of the under the frequency of the reduced strategy where there is an effective reduction of the ripple under the controlled battery based supply respectively. Here the system of the implementation can be operated in any one of the well effective designed modes and that modes includes the scenario of the either of the strategy of the standalone and followed by or the connection oriented grid in a well efficient manner respectively. Under the mode of the connection oriented grid the controlling power based on the inverter related boost by the help of the reactive followed by the active scenario based perspective by the generalized algorithm of the second order integrator and there is a proper provisioning of the signal conditioning under the design oriented systems of the single phase respectively. Simulations have been conducted on the present method where there is a lot of analysis takesplace in the system under which a test bed is conducted with a infinite number of

the datasets with respect to the differentiated environmental strategies for the accurate analysis of the proposed system in terms of the performance followed by the outcome of the entire system respectively.

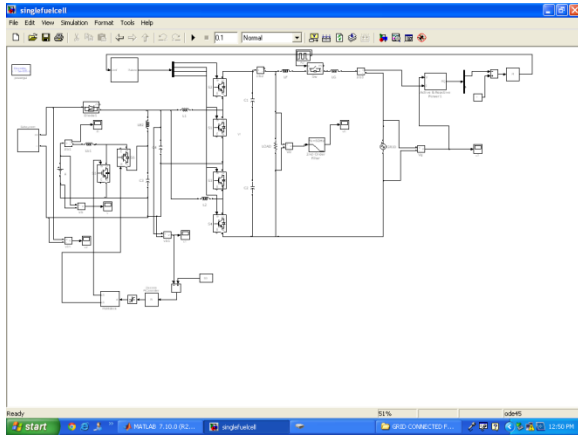
**KEYWORDS:** *Inverter boost circuit, Connection grid, Single phase system, Control of PQ, System of power condition strategy, Cell oriented fuel and active and the reactive power respectively.*

## 1. INTRODUCTION:

Here the design of the systems based on the energy generation plays a crucial role for the well effective design of the system under which it is done on behalf of the solar related fuel cells in effective with the help of the PV and in integration with respect to the scenario of the combined strategy of the loads related to the ac and dc is a major concern respectively [1]. There is a lot more technologies under the scenario of the conversion of the energy based systems related to the field of the electronics and that includes the mechanism of the application of the target oriented storage of the energy is a major concern respectively. Here there is a huge support from the system of the FC under which there is a requirement of the additional storage unit by the support of the improved quality in terms of the power and its storage is a major concern respectively.

Here under the constraints of the loads related to the ac based strategy the systems completely make use of these system in a well effective manner under which there is an inter connection with respect to the grid of the electricity and requirement of the stage related to the inversion respectively. Here the parameters are designed in such a manner under which where everything in terms of the load current followed by the scenario of the variable reduction of the reduced FC related to the power of the basis of the typical output respectively. Here the complete assumption of the system takes place under the design of the well effective design oriented scenario of the VI (current voltage) based characteristics in a well efficient manner respectively. Here the complete analysis is with respect to the exchange of the phenomena related to the strategy of the module of the power based features and the proton of the 72 cell oriented exchange respectively [5].

## BLOCK DIAGRAM



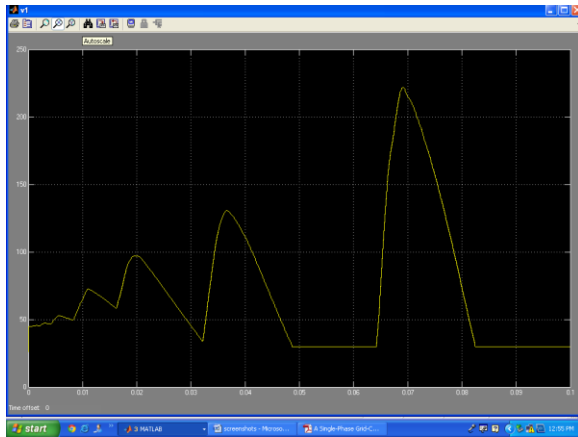
**Fig. Shows the block diagram of the single phase fuel cell**

## 2. METHODOLOGY:

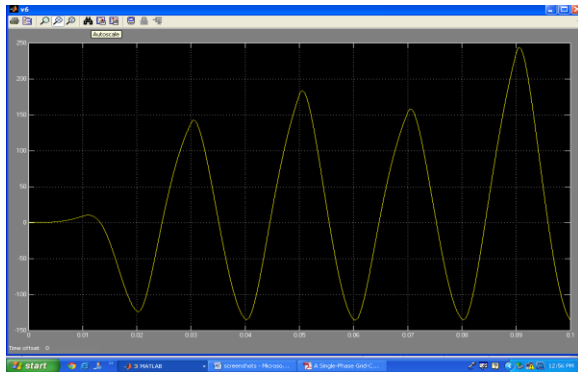
In this paper a new technique is proposed under which it is implemented with an advanced strategy where it includes the powerful mechanism and is shown in the above figure in the form of the block diagram and is explained in an elaborative fashion respectively [2][3]. Here in terms of the design of the proposed method under which there is a well effective design of the system based strategy of the well integrated FC based features under the proposed inter connection of the grid based features is a major concern respectively. Here the above diagram explains in a brief manner about how the flow of power plays a crucial role in

its design based architecture respectively. Here the above design based strategy consists of the power converters and that are couple of them are utilized here in a well effective manner respectively. Here both of them are names as the inverter based on the strategy of the boosting followed by the well effective scenario of the unit of backup of the bi directional basis plays a crucial role and is also a major analysis perspective respectively [4]. Here the design of the inverter under which related to the well effective strategy of the boost based phenomena under which there is a controlled voltage and generation of the power based on the FC followed by the support of the storage of the related energy based battery in terms of the bi directional converter current controlled mode of the incorporation is a major concern respectively. There is a necessary adjustment must and should be made under the system of the FC by the variation of the voltage related to the input under the operation of the constant power maintenance respectively. There is a huge limitation for the current and the voltage under which where there is a huge challenge for the purpose of the protection of the FC is a major concern [6].

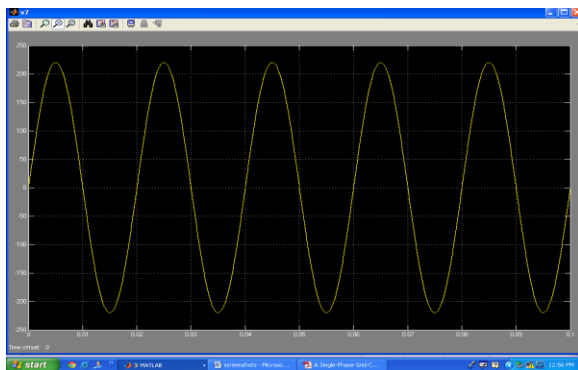
**3. EXPECTED RESULTS:**



**Fig. Shows the DC Link Voltage**



**Fig. Shows the Boost Inverter Output Voltage**



**Fig. Shows the Grid Voltage**

A comparative analysis is made between the present method to that of the several previous methods in a well effective manner respectively. Here the design of the present method completely overcomes the drawbacks of the several previous methods in a well effective manner respectively. Here the complete analysis of the proposed method is done and its simulated results are shown in the above figure in the form of the graphical representation and is explained in an elaborative fashion respectively. Here the implementation of the present proposed method completely studies the problems of the several previous methods and controls the problems of the previous methods and make necessary correction related to the scenario of the present method implementation and the analysis point of view in which there may be a complete control of the degradation of the performance and in accordance with the improvement in the entire outcome of the system in a well accurate manner respectively. Here we finally conclude that the design of the present method is effective and efficient in terms of the improvement in the performance followed by the outcome of the entire in a well effective scenario respectively.

#### 4. CONCLUSION:

In this present mechanism a well effective algorithm is designed under which there is an integration of the powerful mechanism is implemented under which there is a well effective design of the energy system for the purpose of the efficient storage of the power by the integration of the capacitor relative to the photo voltaic (PV) based strategy is a major concern respectively. Here the design of the system includes the topology of the system based FC interconnection under which grid of the power stage based strategy under which oriented on behalf of the single phase phenomena is a major concern respectively. Here the proper implementation of the system where there is a maintenance of the battery based backup of the storage of the energy plays an effective role under the desired unit of the storage is a major concern respectively.

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