

ARC '18

مؤتمر مؤسسة قطر
السنوي للبحوث

QATAR FOUNDATION
ANNUAL RESEARCH CONFERENCE

البحث والتطوير: التركيز على
الأولويات، وإحداث الأثر

R&D: FOCUSING ON PRIORITIES,
DELIVERING IMPACT

20-19 مارس
19-20 MARCH



مؤسسة قطر
Qatar Foundation

إطلاق قدرات الإنسان.
Unlocking human potential.

Energy and Environment - Poster Display

<http://doi.org/10.5339/qfarc.2018.EEPD57>

GridConnected CapacitorTapped MultiModule Voltage Source Converter

Ahmed Abbas Elserougi*, Shehab Ahmed, Ahmed Massoud

Qatar University
* ahmed.elserougi@qu.edu.qa

In this work, a new dc-ac converter is proposed for grid integration purposes, namely, capacitor-tapped multi-module dc-ac voltage source converter. The main advantages of the proposed converter when compared with the conventional dc-ac modular multilevel converter (assuming the same voltage rating of semiconductor devices) are: (i) employment of a lower number of semiconductor devices, but with a higher current rating hence it provides operation with a lower number of gate driver circuits, and (ii) employment of a lower number of dc capacitors which reduces the number of measured variables, which affects positively the cost and reduces the computational burden of the employed controller.

© 2018 The Author(s), licensee HBKU Press. This is an open access article distributed under the terms of the Creative Commons Attribution license CC BY 4.0, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

دار جامعة حمد بن خليفة للنشر
HAMAD BIN KHALIFA UNIVERSITY PRESS



Cite this article as: Elserougi A et al. (2018). GridConnected CapacitorTapped MultiModule Voltage Source Converter. Qatar Foundation Annual Research Conference Proceedings 2018: EEPD57
<http://doi.org/10.5339/qfarc.2018.EEPD57>.

