Nowadays, Thailand aims 6,000 MWp of PV installation in 2035 according to the Alteration Energy Development Plan (AEDP2015). The target was changed from 500MWp in 2008 and from 3,800 MWp in 2014. It is seemed that PV system installation was skyrocketing in 2011 due to domestic incentive and price down dramatically. Nevertheless, Thailand has been initiated renewable energy application since 2002. The distributed generation with grid-connected inverter was referred to IEEE929:2000. Then, connection codes were issued in 2008 which IEC61727, IEC62116, and IEEE1547 was mentioned. These connection codes are provided by two of grid utility in Thailand. Metropolitan Electricity Authority (MEA) who has coverage in Bangkok and 2 adjacent provinces (i.e. Nonthaburi and Samut Prakan). Provincial Electricity Authority (PEA) who has coverage in rest of provinces. Late of 2013, MEA and PEA were issued the grid code for PV inverter of their own. Several requirements deviate with other well-known standard in order to adopt for their own distribution system such as public voltage level and frequency, protection setting and grid support requirements. After 3 years of promulgation, the new grid code for inverter has already issued in late of 2016. There are few modifications from previous version. The deviations of grid code for PV inverter of Thailand are following. (1) Harmonic: MEA refers the IEEE1547.1 unless the percentage of Total harmonics Distortion of Current (THDi) calculates follow IEC definition. PEA also requires Total Harmonic Distortion of Voltage (THDv) result and the voltage harmonics. (2) Active Power Control: Test procedure of PEA requires each reaching time of reducing 10% of nominal output power (Pn) from 100% to 0% of Pn. (3) Reactive Power Control: PEA specified the test items for the not more than 500kW and more than 500kW generation system. The first one requires only a capability of a Fix Displacement Factor $\text{Cos}\theta$ at 0.95. Other requires for 2 of capabilities namely, a Fix Displacement Factor $\text{Cos}\theta$ at 0.90 and a Variable Reactive Power Depending on Voltage. (4) Low Voltage Fault Ride Through: PEA requires the test results of fault conditions namely, Three-phase symmetry, Phase-to-phase without ground and single phase to ground. At 10%, 30% and more than 90% of Pn condition as well. (5) Over/Under Voltage: MEA’s test procedure specified the final value at ±1V of trip voltage setting. Therefore, several differences of grid code effect to capability of PV grid-connected inverter which intended to connect to electric network. Also, testing laboratories whose client attended in Thailand market necessary to modify the standard test procedure to comply with Thailand’s grid code.