CLAIMS

1. A method for storing NG in an adsorbent storage device, the method comprising the steps of:

providing the NG in a liquid phase to a first heat exchanger;

gasifying the NG using the first heat exchanger; and

feeding the NG in the gaseous phase into the adsorbent storage device, wherein the NG is gasified using the first heat exchanger such that the NG in the gaseous phase is fed into the adsorbent storage device at a cryogenic temperature for cooling of an adsorbent material of the adsorbent storage device.

2. The method as claimed in claim 1, wherein gasifying the NG using the first heat exchanger comprises cooling a liquid for heat exchange to gasify the NG.

3. The method as claimed in claim 2, further comprising using the cooled liquid for further processes.

~~4. The method as claimed in any one of the preceding claims, wherein the NG is gasified using the first heat exchanger such that the NG in the gaseous phase is fed into the adsorbent storage device at a cryogenic temperature for cooling of an adsorbent material of the adsorbent storage device.~~

~~5~~4. The method as claimed in any one of the preceding claims, further comprising regulating a pressure of the NG in the gaseous phase for feeding into the adsorbent storage device.

~~6~~5. The method as claimed in claim ~~5~~4, wherein the NG is fed into the adsorbent storage device at a near atmospheric pressure.

~~7~~6. The method as claimed in any one of the preceding claims, wherein the NG is stored in the adsorbent storage device at a pressure in the range of 30 bar to 40 bar.

~~8~~7. The method as claimed in any one of the preceding claims, wherein feeding the NG in the gaseous state into the adsorbent storage device comprises cooling an adsorbent material of the adsorbent storage device.

~~9~~8. The method as claimed in claim ~~8~~7, wherein the cooling of the adsorbent material of the adsorbent storage device uses a second heat exchanger.

~~10~~9. The method as claimed in claim ~~9~~8, wherein the second heat exchanger is incorporated into the adsorbent storage device.

~~11~~10. The method as claimed in any one of the preceding claims, further comprising discharging the NG from the adsorbent storage device using a pressure swing method.

~~12~~11. The method as claimed in claim ~~11~~10, wherein discharging the NG from the adsorbent storage device further comprises heating an adsorbent material of the adsorbent storage device.

~~13~~12. The method as claimed in claim ~~12~~11, wherein the heating of the adsorbent material of the adsorbent storage device uses the second heat exchanger.

~~14~~13. A system for storing NG, the system comprising:

a first heat exchanger for gasifying the NG;

an adsorbent storage device;

means for providing the NG in a liquid phase to the first heat exchanger; and

means for feeding the NG in the gaseous phase from the first heat exchanger into the adsorbent storage device at a cryogenic temperature for cooling of an adsorbent material of the adsorbent storage device.

~~15~~14. The system as claimed in claim ~~14~~13, further comprising means for regulating a pressure of the NG in the gaseous phase for feeding into the adsorbent storage device.

~~16~~15. The system as claimed in claim ~~14~~ 13 or ~~15~~14, wherein the NG is stored in the adsorbent storage device at a pressure in the range of 30 bar to 40 bar

~~17~~16. The system as claimed in any one of claims ~~14~~ 13 to ~~16~~15, further comprising means for discharging the NG from the adsorbent storage device using a pressure swing method.

~~18~~17. The system as claimed in any one of claims ~~14~~ 13 to ~~17~~16, further comprising a second heat exchanger for cooling or heating of an adsorbent material of the adsorbent storage device.

~~19~~18. The ~~method~~ system as claimed in claim ~~18~~17, wherein the second heat exchanger is incorporated into the adsorbent storage device.