

MS Workshop case studies

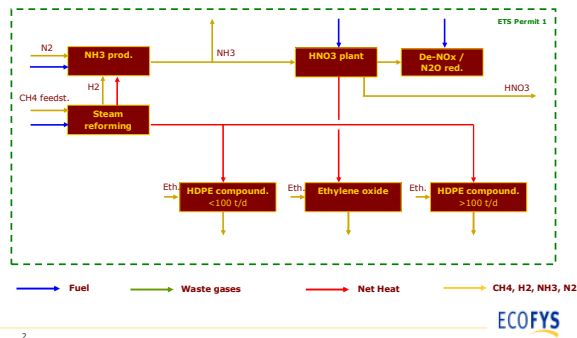
Case study: ammonia and nitric acid production

2 May 2011

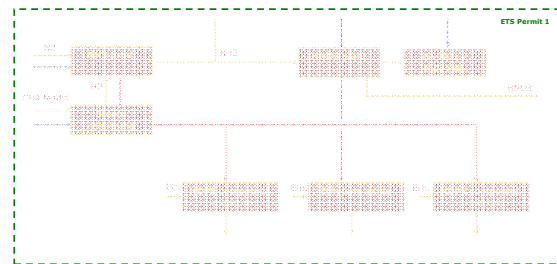
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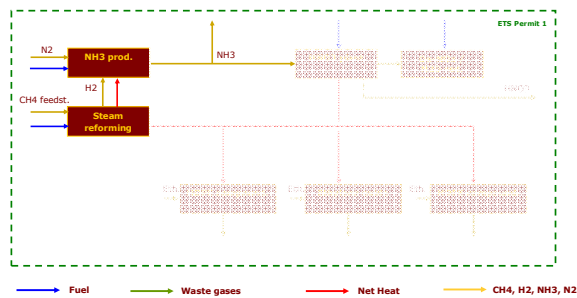
Ammonia and nitric acid production



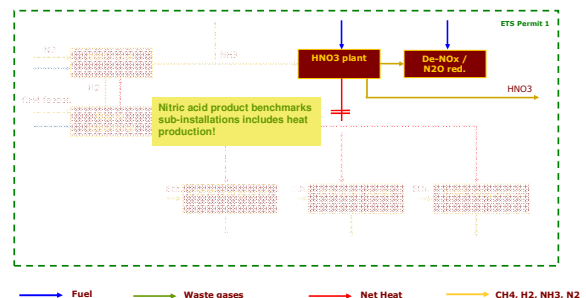
Ammonia – nitric acid production



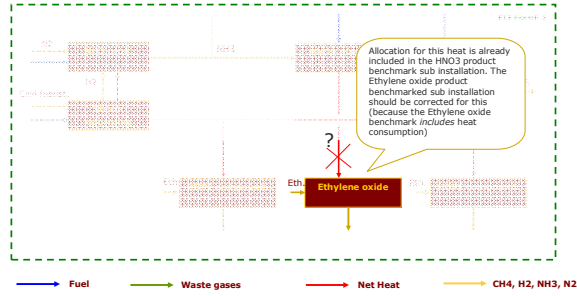
Define sub-installations
Ammonia (NH3) product benchmark sub-installation



Define sub-installations
Nitric acid HNO3 product benchmark sub-installation



Define sub-installations Ethylene product benchmark sub-installation

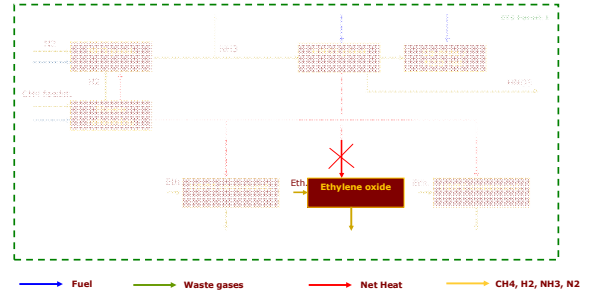


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A SUSTAINABLE ENERGY SUPPLY FOR EVERYONE

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Define sub-installations Ethylene product benchmark sub-installation

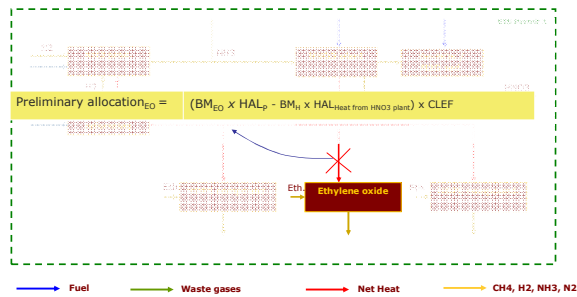


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Define sub-installations Ethylene product benchmark sub-installation

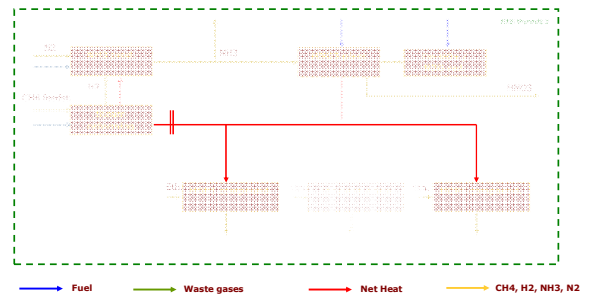


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Define sub-installations Heat benchmark CL



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4 separate rather than one single permit!

- See next

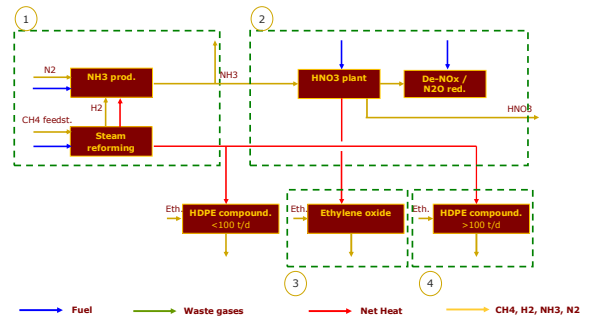
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Ammonia – nitric acid production

FOUR separate permits!



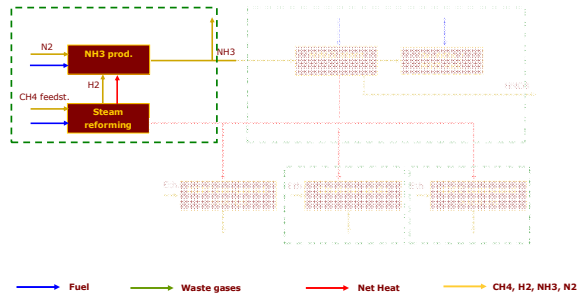
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Ammonia – nitric acid production

Permit 1: NH3 product benchmark sub installation

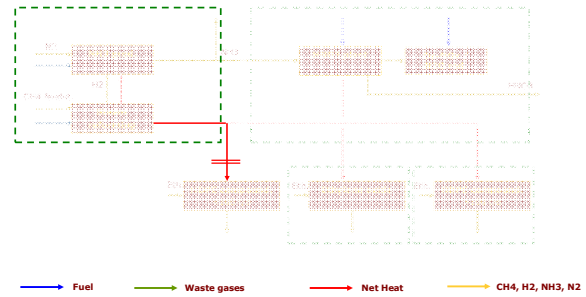


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Ammonia – nitric acid production

Permit 1: Heat benchmark CL

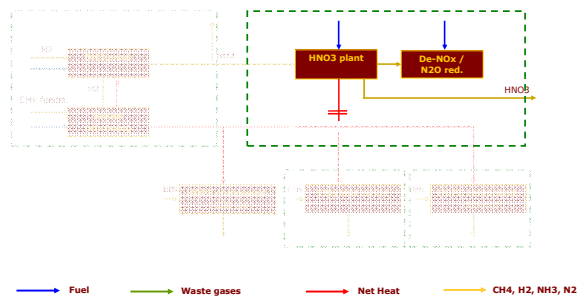


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Ammonia – nitric acid production

Permit 2: HNO3 product benchmark sub installation

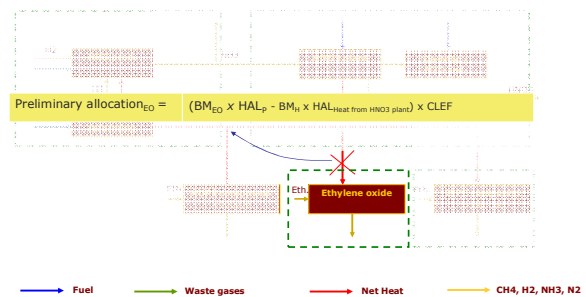


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Ammonia – nitric acid production

Permit 3: Ethylene product benchmark subs installation

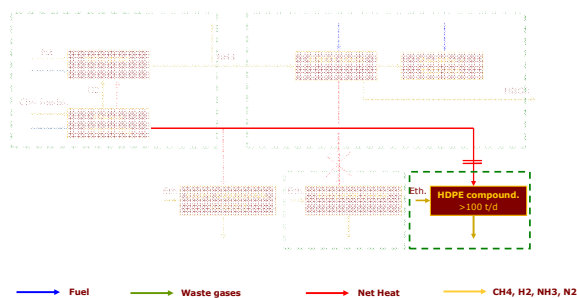


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Ammonia – nitric acid production

Permit 4: heat benchmark



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